Catalogue of Salmon Streams and Spawning Escapements of Statistical Area 29 Mission-Harrison

M.J. Hancock and D.E. Marshall

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Salmonid Enhancement Program
1090 West Pender Street
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May, 1985

Canadian Data Report of
Fisheries & Aquatic Sciences
No. 518

85-5824/

Canadian Data Report of Fisheries and Aquatic Sciences

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CATALOGUE OF SALMON STREAMS AND SPAWNING ESCAPEMENTS

STATISTICAL AREA 29
MISSION/HARRISON

by

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Minister of Supply and Services Canada 1985
Cat. No. Fs 97-13/518 ISSN 0706-6465

Correct citation for this publication:

Hancock, M.J. and D.E.Marshall. 1985 Catalogue of Salmon Streams
and Spawning Escapements of Statistical Area 29 Mission-Harrison
Can. Data Rep. Fish and Aquat Sci. 518: xiv + 117p.

ABSTRACT

Hancock, M.J. and D.E.Marshall, 1985. Catalogue of Salmon Streams and Spawning Escapements of Statistical Area 29, Mission-Harrison. Can. Data Rep. Fish and Aquat. Sci. 518: xiv + 117p.

Catalogue containing each stream's location, spawning distribution, barriers and points of difficult ascent, escapement records and other general data pertaining to the stream. The catalogue also includes a topographical map of the stream and in some cases a sketch map which further describes the surrounding area.

Keywords: British Columbia, Statistical Area 29, Mission-Harrison, salmon streams, spawning escapements.

RÉSUMÉ

Hancock, M.J. and D.E.Marshall, 1985 Catalogue of Salmon Streams and Spawning Escapements of Statistical Area 29, Mission-Harrison. Can. Data Rep. Fish and Aquat. Sci. 518:xiv + 117p.

Le présent répertoire donne l'emplacement de chaque cours d'eau, la répartition de fraie, les points de remonte difficile, les données sur les saumons de remonte et d'autres information générales concernant le cours d'eau. On y trouve aussi une carte topographique de l'emplacement du cours d'eau et, dans quelque cas,un croquis décrivant la zone environte.

Mots-cles: Colombie-Britannique, zone statistique 29, Mission-Harrison, cours d'eau a saumons, remonte.

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6. (Coho Creek) 17
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8. (East Creek) 23
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10. (Hicks Creek) 31
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17. MYSTERY CREEK 55
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READ CAREFULLY

1. PIN UP IN WHEELHOUSE.
2. WHEN DELIVERING YOUR CATCH, GIVE TALLY MAN THE MAP NUMBER, OR NUMBERS SHOWING THE AREA IN WHICH YOUR FISH WERE CAUGHT.
3. ACCURATE CATCH REPORTS WILL HELP PRESERVE YOUR FISHERIES.
4. FOR COMPLETE DETAILS, CONSULT BRITISH COLUMBIA FISHERIES REGULATIONS.

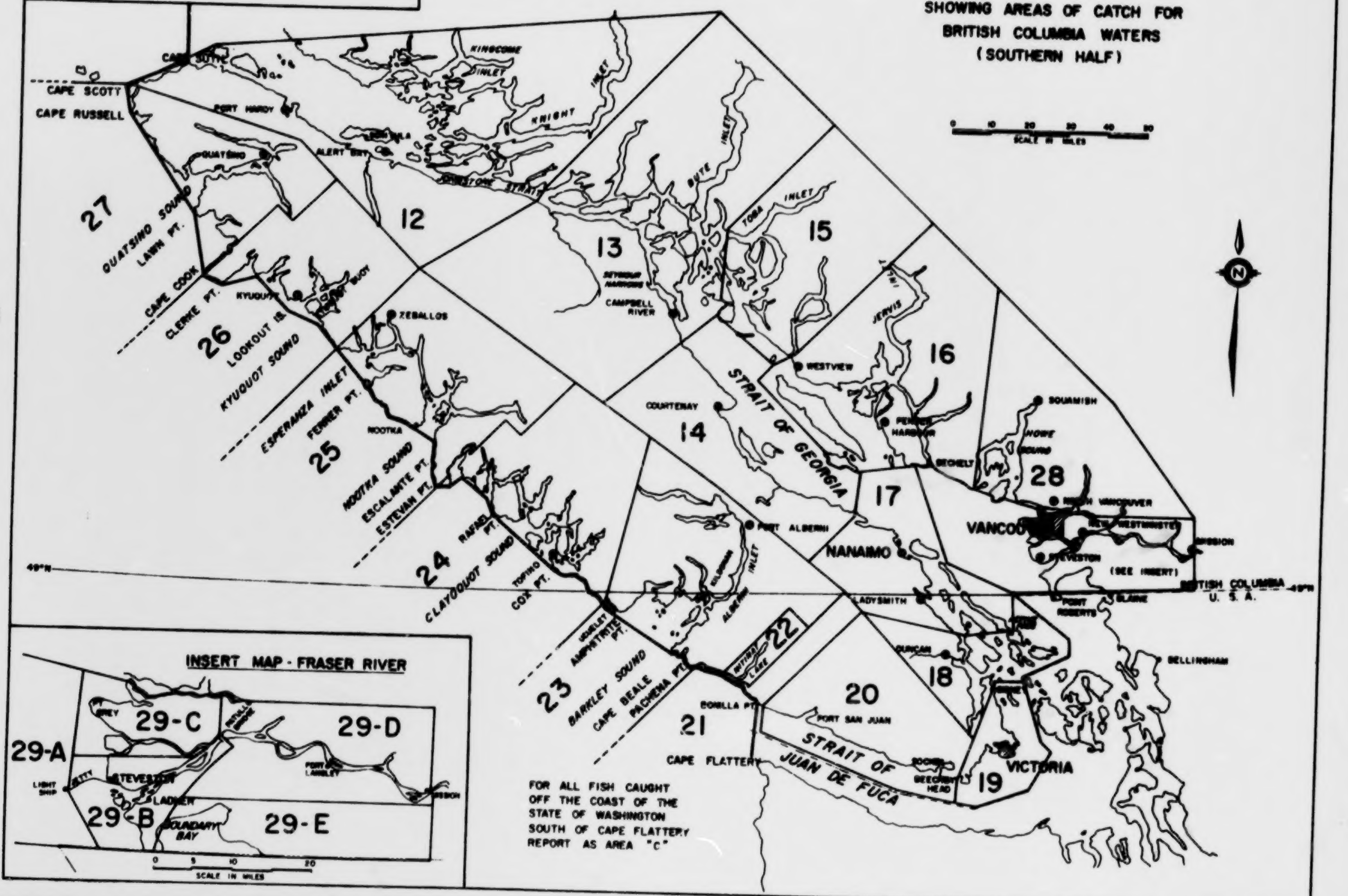
— STATISTICAL AREAS ARE DIVIDED BY RED LINES

— SALMON FISHING WITH NETS OF ANY KIND IS NOT PERMITTED OUTSIDE OF - THAT IS SEAWARD OF - THE HEAVY BLACK LINE.

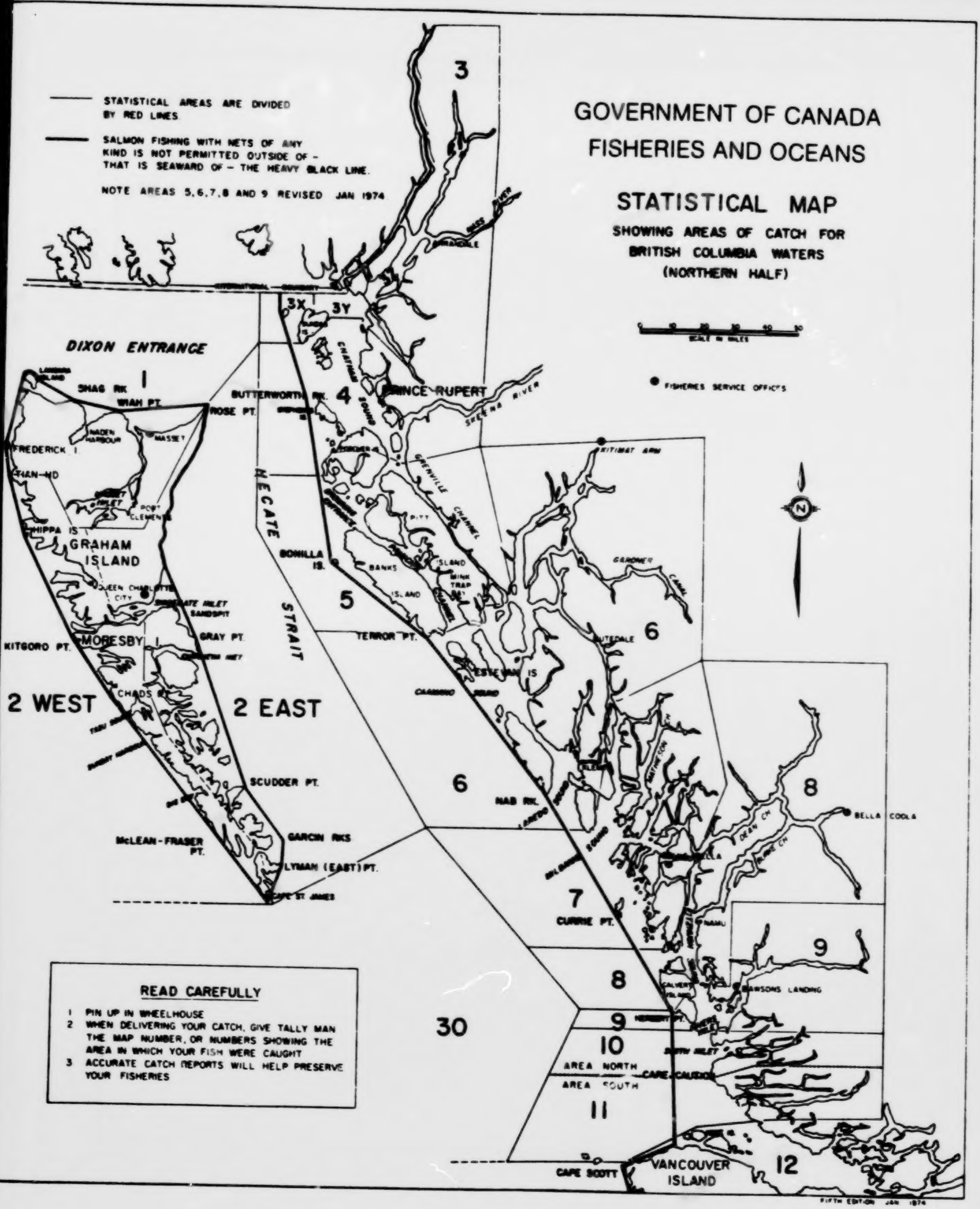
● FISHERIES SERVICES OFFICES

DEPARTMENT OF THE ENVIRONMENT
FISHERIES SERVICE

STATISTICAL MAP
SHOWING AREAS OF CATCH FOR
BRITISH COLUMBIA WATERS
(SOUTHERN HALF)


0 10 20 30 40 50
SCALE IN MILES
N
CAPE SUTIL
CAPE SCOTT
CAPE RUSSELL
PORT HARDY
KINGCOME INLET
KNIGHT INLET
ALERT BAY
JOHNSTONE STRAIT
QUATSINO
27
QUATSINO SOUND
LAWN PT.
CAPE COOK
CLERKE PT.
KYUQUOT
26
LOOKOUT IS.
KYUQUOT SOUND
12
ZEBALLOS
ESPERANZA INLET
FERRER PT.
NOOTKA
25
NOOTKA SOUND
ESCALANTE PT.
ESTEVAN PT.
13
BUTE INLET
SEYMOUR NARROWS
CAMPBELL RIVER
TOBA INLET
15
JERVIS INLET
WESTVIEW
16
PENDER HARBOUR
SQUAMISH
HOWE SOUND
COURTENAY
14
STRAIT OF GEORGIA
SECHELT
17
28
NORTH VANCOUVER
VANCOUVER
NEW WESTMINSTER
MISSION
STEVESTON
(SEE INSERT)
NANAIMO
PORT ALBERNI
ALBERNI INLET
24
RAFAEL PT.
CLAYOQUOT SOUND
TOFINO
COX PT.
49°N
BRITISH COLUMBIA
U. S. A.
LADYSMITH
POINT ROBERTS
BLAINE
BELLINGHAM
UCLUELET
AMPHITRITE PT.
23
BARKLEY SOUND
CAPE BEALE
PACHENA PT.
22
NITINAT LAKE
21
BONILLA PT.
CAPE FLATTERY
20
PORT SAN JUAN
DUNCAN
18
STRAIT OF JUAN DE FUCA
SOOKE
BEECHEY HEAD
19
VICTORIA
FOR ALL FISH CAUGHT OFF THE COAST OF THE STATE OF WASHINGTON SOUTH OF CAPE FLATTERY REPORT AS AREA "C"
INSERT MAP - FRASER RIVER
PT. GREY
29-C
29-D
29-A
LIGHT SHIP
STEVESTON
LADNER
PORT LANGLEY
MISSION
29-B
BOUNDARY BAY
29-E
0 5 10 20
SCALE IN MILES

FOURTH EDITION APRIL [illegible]



GOVERNMENT OF CANADA
FISHERIES AND OCEANS

STATISTICAL MAP
SHOWING AREAS OF CATCH FOR
BRITISH COLUMBIA WATERS
(NORTHERN HALF)

STATISTICAL AREAS ARE DIVIDED BY RED LINES.

SALMON FISHING WITH NETS OF ANY KIND IS NOT PERMITTED OUTSIDE OF – THAT IS SEAWARD OF – THE HEAVY BLACK LINE.

NOTE AREAS 5, 6, 7, 8 AND 9 REVISED JAN 1974

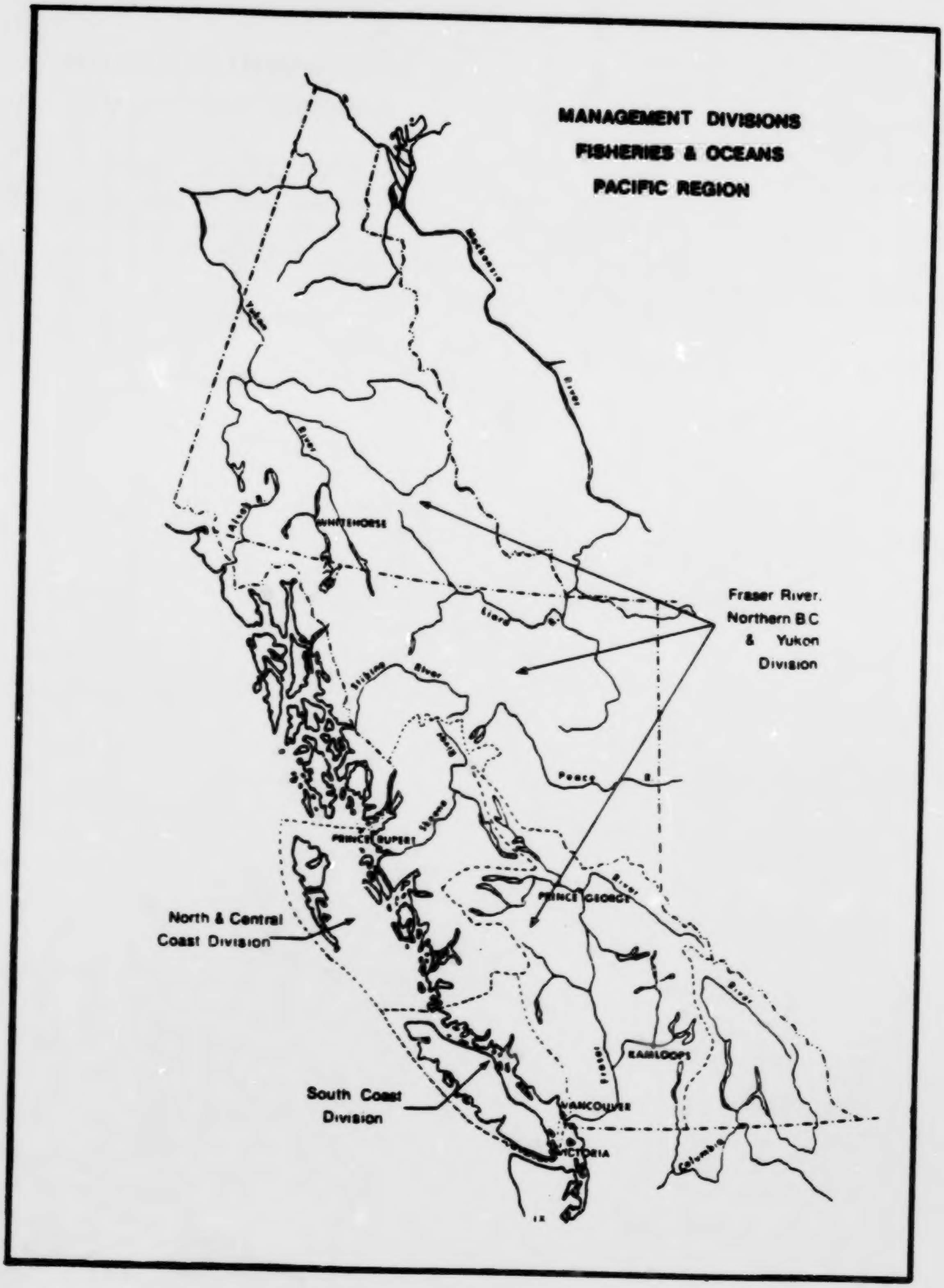
● FISHERIES SERVICE OFFICES

READ CAREFULLY

1 PIN UP IN WHEELHOUSE
2 WHEN DELIVERING YOUR CATCH, GIVE TALLY MAN THE MAP NUMBER, OR NUMBERS SHOWING THE AREA IN WHICH YOUR FISH WERE CAUGHT
3 ACCURATE CATCH REPORTS WILL HELP PRESERVE YOUR FISHERIES

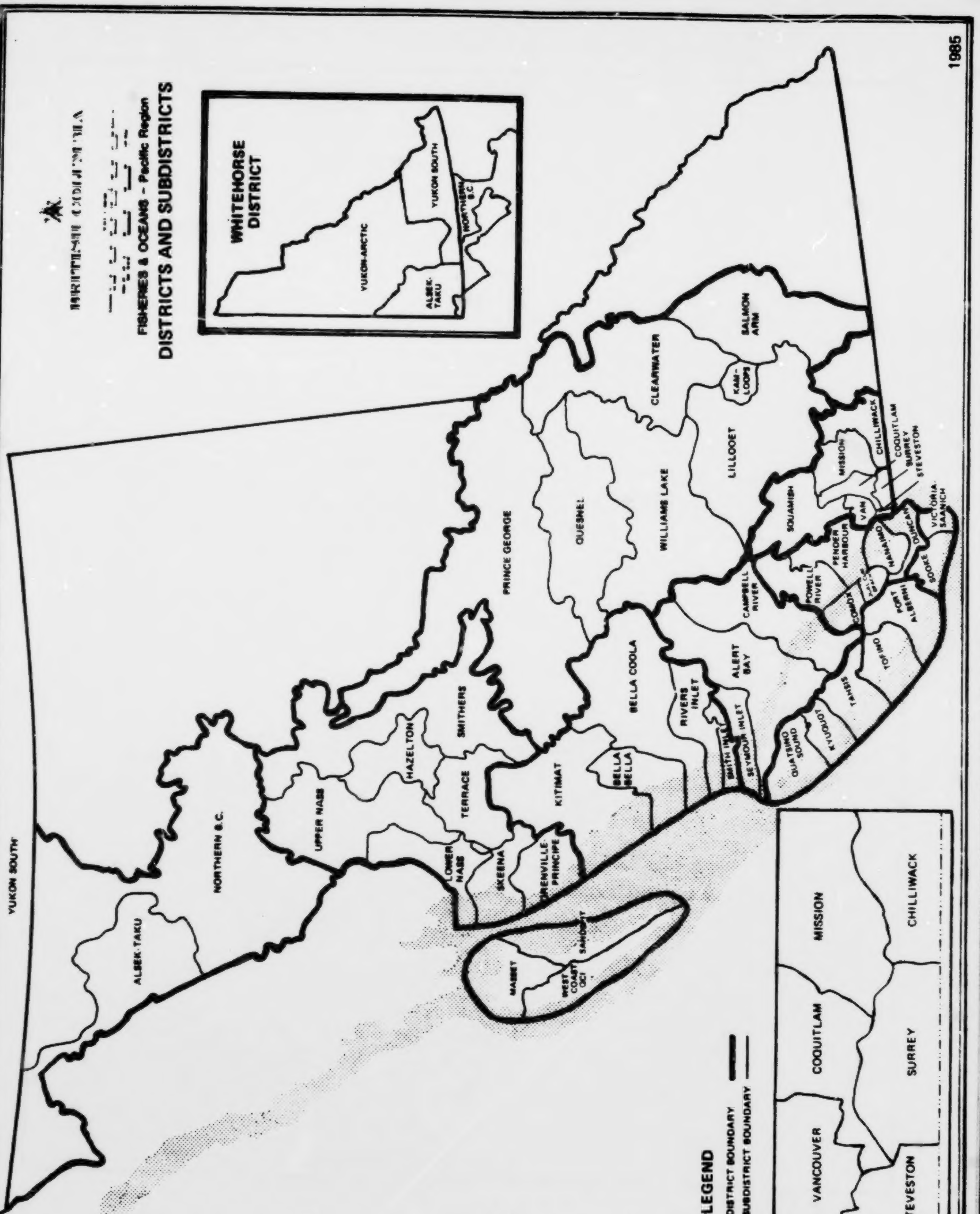
FIFTH EDITION JAN 1974

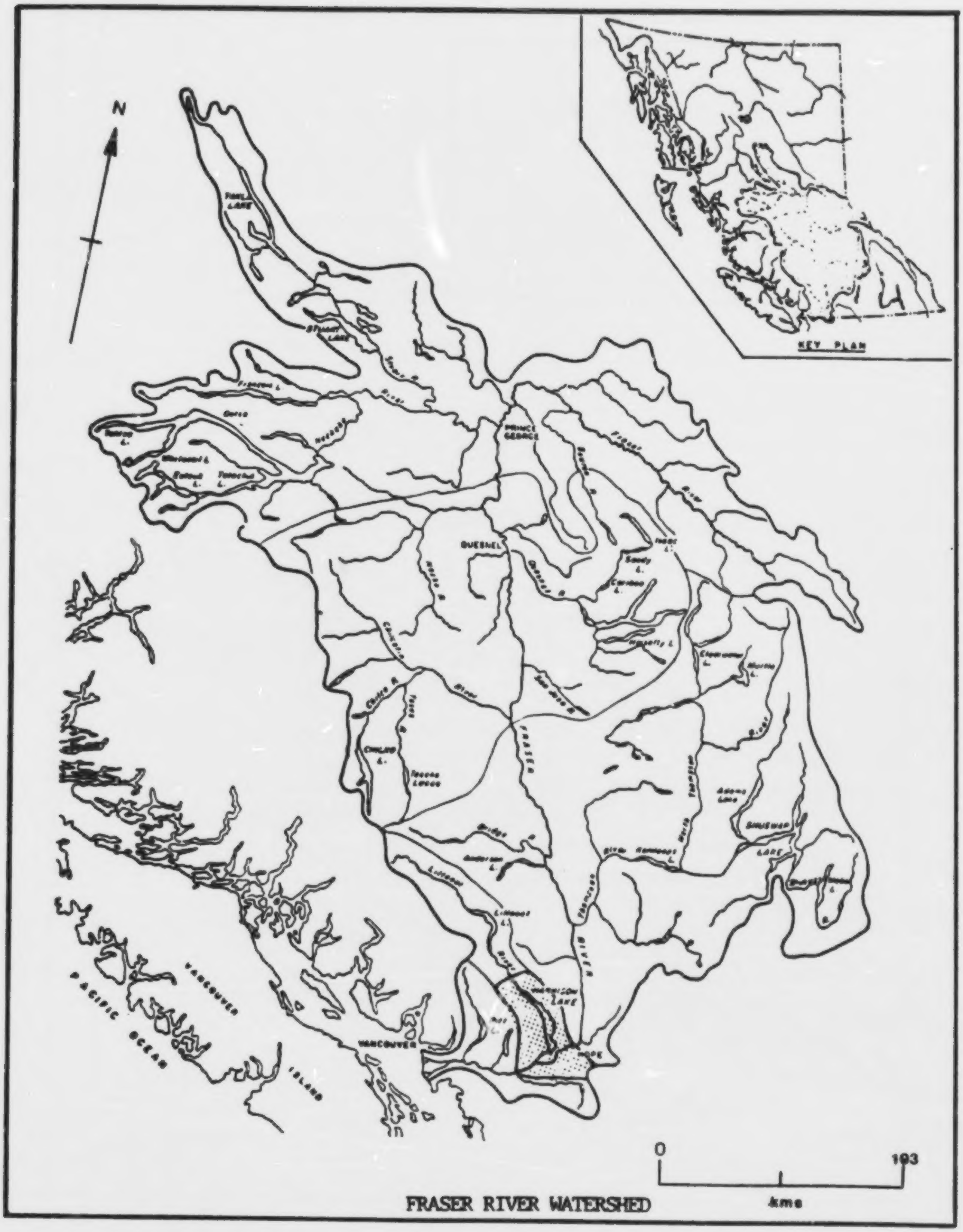
0 10 20 30 40 50
SCALE IN MILES
N
INTERNATIONAL BOUNDARY
3
3X
3Y
NASS RIVER
DIXON ENTRANCE
1
SHAG RK
WIAH PT.
ROSE PT.
BUTTERWORTH RK.
4
PRINCE RUPERT
SKEENA RIVER
CHATHAM SOUND
GRENVILLE CHANNEL
NADEN HARBOUR
MASSET
FREDERICK I.
TIAN HD
PORT CLEMENTS
HIPPA IS
GRAHAM ISLAND
QUEEN CHARLOTTE CITY
SANDSPIT
GRAY PT.
KITGORO PT.
MORESBY I.
CHADS PT.
2 WEST
2 EAST
HECATE STRAIT
SCUDDER PT.
GARCIN RKS
McLEAN-FRASER PT.
LYMAN (EAST) PT.
CAPE ST. JAMES
BONILLA IS.
BANKS ISLAND
PITT ISLAND
MINK TRAP BAY
5
TERROR PT.
KITIMAT ARM
GARDNER CANAL
BUTEDALE
6
ESTEVAN IS
6
NAB RK.
LAREDO SOUND
MILBANKE SOUND
8
DEAN CH.
BELLA COOLA
BELLA BELLA
7
CURRIE PT.
NAMU
9
8
9
CALVERT ISLAND
RIVERS INLET
HERBERT PT.
DAWSONS LANDING
30
10
SMITH INLET
AREA NORTH
CAPE CAUTION
AREA SOUTH
11
CAPE SCOTT
VANCOUVER ISLAND
12



MANAGEMENT DIVISIONS
FISHERIES & OCEANS
PACIFIC REGION

Mackenzie River
Yukon River
Alsek
WHITEHORSE
Liard
Fraser River, Northern B.C & Yukon Division
Stikine River
Nass
Peace R
Skeena
PRINCE RUPERT
PRINCE GEORGE
Fraser River
North & Central Coast Division
KAMLOOPS
South Coast Division
VANCOUVER
VICTORIA
Columbia River


FISHERIES & OCEANS - Pacific Region
DISTRICTS AND SUBDISTRICTS
WHITEHORSE DISTRICT
YUKON-ARCTIC
YUKON SOUTH
ALSEK-TAKU
NORTHERN B.C.
YUKON SOUTH
ALSEK-TAKU
NORTHERN B.C.
UPPER NASS
LOWER NASS
SKEENA
HAZELTON
TERRACE
SMITHERS
KITIMAT
GRENVILLE PRINCIPE
MASSET
WEST COAST QCI
SANDSPIT
BELLA BELLA
BELLA COOLA
RIVERS INLET
SMITH INLET
SEYMOUR INLET
ALERT BAY
QUATSINO SOUND
KYUQUOT
TAHSIS
TOFINO
PORT ALBERNI
CAMPBELL RIVER
COMOX
POWELL RIVER
PENDER HARBOUR
NANAIMO
DUNCAN
SOOKE
VICTORIA-SAANICH
VAN
SQUAMISH
PRINCE GEORGE
QUESNEL
WILLIAMS LAKE
LILLOOET
CLEARWATER
KAMLOOPS
SALMON ARM
MISSION
CHILLIWACK
COQUITLAM
SURREY
STEVESTON
LEGEND
DISTRICT BOUNDARY
SUBDISTRICT BOUNDARY
VANCOUVER
COQUITLAM
MISSION
CHILLIWACK
SURREY
STEVESTON
1985


N
KEY PLAN
Takla Lake
Stuart Lake
Stuart R.
Fraser L.
Nechako
River
Ootsa L.
Tetachuck L.
Eutsuk L.
Prince George
Quesnel
Fraser River
Bowron R.
Quesnel R.
Sandy L.
Cariboo L.
Horsefly L.
Clearwater L.
Murtle L.
Chilcotin River
Chilko R.
Chilko L.
Taseko R.
Taseko Lakes
San Jose R.
FRASER RIVER
Bridge R.
Anderson L.
Lillooet
Lillooet L.
Thompson
North Thompson
Adams Lake
Shuswap Lake
Kamloops L.
Harrison Lake
Pitt L.
Hope
Vancouver
Pacific Ocean
Vancouver Island
0
193
kms

FRASER RIVER WATERSHED

STANDARDS USED ON STREAM DATA PAGE

Name of Stream: Name given in Gazetteer of Canada, British Columbia 1966 edition;

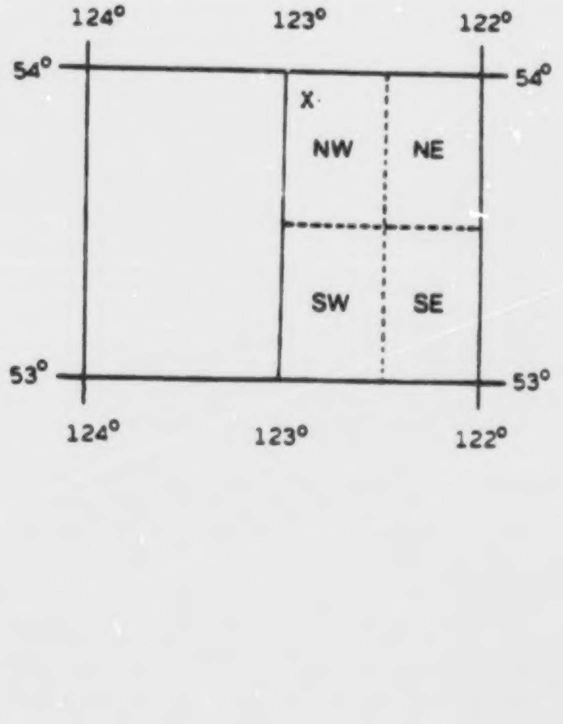
Statistical Area: As defined by D.F.O.showing areas of catch for B.C.waters (Map dated Jan. 1974)

Districts and Subdistricts : As defined by D.F.O.(Map 1985)

RAB Numbers : The Aquatics Unit of the Resource Analysis Branch, Ministry of the Environment have assigned a hierarchical coding system (RAB number) to drainage basins of British Columbia. RAB numbers classify catchment areas and river channels. Further information on RAB coding system can be found in "A Hierarchical Watershed Coding System for British Columbia", RAB Technical Paper #3, Ministry of the Environment, Victoria, B.C. June 1980.

Location and Position: Defined by quadrant indexing. Each geographical quadrilateral of the earth's surface of 1 degree in extent in latitude and longitude is divided into the SE, SW, NE and NW quarters. The south-east corner of each quadrilateral gives the initial point for the figure of reference (Gazetteer of Canada).

EXAMPLE "X"
53° 122° NW



Length: The portion of the stream accessible to spawning salmon.

Drainage: Area in square kilometers of the entire drainage basin feeding the stream.

Discharge: Extremes of maximum and minimum daily discharge for the period of the last 30 years. Discharge date is taken from "Historical Stream Flow Summary", British Columbia, Water Survey of Canada.

Temperature: As described (^{o}C)

Barriers and Points of difficult ascent: Complete and partial barriers to salmon and their distance from the stream mouth. Species likely to be affected may be listed. Both natural and man-made obstructions are defined.

Spawning distribution:
Portion of the stream utilized by each species. Distribution is indicated by brief comments opposite the species.

General remarks: Emphasizes features of stream and spawning populations. Also includes industrial activity, routes of accessibility, etc. The comments and dates are taken from "Annual Reports of Salmon Streams and Spawning Grounds". In some cases, references to additional information not included in the General remarks may be given.

Escapement Records: The escapement represents the mid point of the coded range of escapement for each species. For example: the letter "H" representing 5000-10000 fish would be entered as 7500. Where absolute numbers are provided by Fisheries Personnel, these numbers are entered. N/O means the stream was inspected, but no fish were observed; UNK means there was evidence of fish present, but no estimates were made; NO RECORDS means no escapement records for the applicable years could be found in the escapement files.

Timing: Dates which salmon arrive in the stream, begin to spawn, reach peak spawning period and finish spawning.

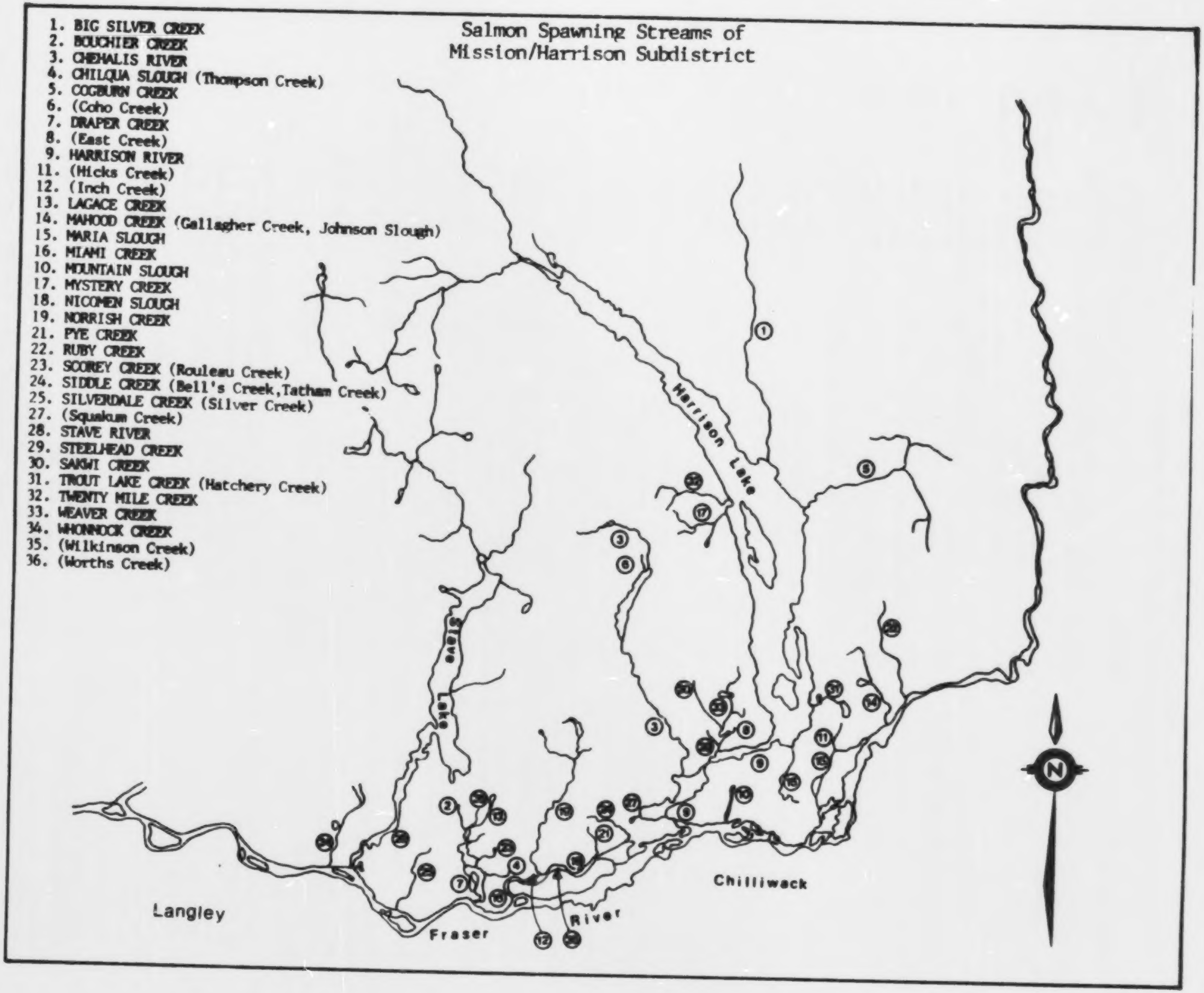
E = early (1st to 10th of the month)
M = mid (11th to 20th of the month)
L = late (21st to end of the month)

NB: Distance references are from the mouth of the stream unless otherwise stated.

FISHERIES & OCEANS - Pacific Region

DISTRICT/SUB-DISTRICT OFFICES

DISTRICT/SUB-DISTRICT	ADDRESS	TELEPHONE	SUB-DISTRICT NUMBER
DISTRICT #1 - Kamloops	202 - 317 Seymour St., Kamloops, V2C 2E9	374-4322	
Salmon Arm	Box 1160, 461 Beatty Ave. NW, Salmon Arm V0E 2T0	832-8037	29K
Prince George	2392 Ompika Blvd., Prince George, V2N 3N5	564-7030	29I
Clearwater	Box 610, Clearwater, V0E 1N0	674-2633	29J
Lillooet	Box 315, Lillooet, V0K 1V0	256-4525	29F
Quesnel	Box 4340, Quesnel, V2J 3J3	992-2434	29H
Williams Lake	540 Borland St, Williams Lake, V2G [illegible]	398-6544	29G
DISTRICT #2 - New Westminster	309 - 549 Columbia St., New West., V3L 1B3	524-7181	
Vancouver	309 - 549 Columbia St., New West., V3L 1B3	524-7306	28A
Surrey	309 - 549 Columbia St., New West., V3L 1B3	524-7171	29B
Coquitlam	309 - 549 Columbia St., New West., V3L 1B3	524-7169	29C
Steveston	1255 No. 1 Road, Richmond, V7E 1T7	274-7217	29A
Squamish	Box 85, Squamish, V0N 3G0	892-3230	28B
Mission	Box 3308, Mission, V2V 4J5	826-3664	29D
Chilliwack	Suite 5, 9375 Mary St., Chilliwack, V2P 4G9	792-6011	29E
DISTRICT #3 - Nanaimo	60 Front St., Nanaimo, V9R 5H7	754-3257	
Nanaimo/Ladysmith	60 Front St., Nanaimo, V9R 5H7	754-3257	17
Qualicum Beach	Box 1270, Qualicum Beach, V0R 2T0	752-9712	14S
Comox	Box 1328, Comox, V9N 3B0	339-2031	14N
Dunan	Box 241, 191 Ingram St., Duncan, V0L 3X3	746-6221	18
Powell River	4488 Marine Avenue, Powell River, V8A 2K2	485-9621	15
Pender Harbour	Box 10, Madeira Park, V0N 2H0	883-2313	16
DISTRICT #4 - Port Alberni	Box 280, Federal Building, Port Alberni, V9Y 7M7	724-0195	
Port Alberni	Box 280, Federal Building, Port Alberni, V9Y 7M7	724-0195	23
Quatsino Sound	Box 10, Port Hardy, V0N 2P0	949-6422	27
Kyuquot	Box 549, Tahsis, V0P 1X0	934-6606	26
Tahsis	Box 549, Tahsis, V0P 1X0	934-6606	25
Tofino	Box 48, Tofino, V0R 2Z0	725-3468	24
DISTRICT #5 - Campbell River	215 - 950 Alder St., Campbell River, V9W 2P8	287-2102	
Campbell River	215 - 950 Alder St., Campbell River, V9W 2P8	287-2102	13
Seymour Inlet	Box 10, Port Hardy, V0N 2P0	949-6422	11
Alert Bay	Box 10, Alert Bay, V0N 1A0	974-5216	12
DISTRICT #6 - Victoria	116 - 816 Government St., Victoria, V8W 1W9	566-3252	
Victoria/Saanich	116 - 816 Government St., Victoria, V8W 1W9	566-3252	19
Sooke	Box 460, Sooke, V0S 1N0	642-5322	20
DISTRICT #7 - Kitimat	315 - 450 Federal Building, Kitimat, V8C 1T6	632-4884	
Butedale	315 - 450 Federal Building, Kitimat, V8C 1T6	632-4884	6
Bella Bella	Box 38, Bella Bella, V0T 1B0	957-2363	7
Bella Coola	Box 130, Bella Coola, V0T 1C0	799-5345	8
Rivers Inlet	Dawson Landing P.O., Rivers Inlet, V0N 1M0		9
Smith Inlet	Dawson Landing P.O., Rivers Inlet, V0N 1M0		10
DISTRICT #8 - Prince Rupert	109 - 417 2nd Ave. West, Prince Rupert, V8J 1G8	624-9137	
Waterfront	109 - 417 2nd Ave. West, Prince Rupert, V8J 1G8	624-9137	
Skeena	109 - 417 2nd Ave. West, Prince Rupert, V8J 1G8	624-9137	4A
Greenville - Principe	109 - 417 2nd Ave. West, Prince Rupert, V8J 1G8	624-9137	5
Lower Nass	109 - 417 2nd Ave. West, Prince Rupert, V8J 1G8	624-9137	3A
Upper Nass	Box 29, Nass Camp, V0J 3J0	633-2408	3B
Hazelton	Box 327, Field Street, Hazelton, V0J 1Y0	842-6327	4C
Smithers	Box 578, Smithers, V0J 2N0	847-2312	4D
Terrace	4721-B Lazelle Ave., Terrace, V8G 1R6	635-2206	4B
DISTRICT #9 - Queen Charlotte Is.	Box 99, Queen Charlotte City, V0T 1S0	559-4413	
West Coast Q.C.I.	Box 99, Queen Charlotte City, V0T 1S0	559-4413	2W
Masset	Box 99, Masset, V0T 1M0	626-3316	1
Sandspit	Box 222, Sandspit, V0T 1T0	637-5340	2E
DISTRICT #10 - Whitehorse	122 Industrial Road, Whitehorse, Y.T., Y1A 2T9	667-2235	
Yukon South/Northern B.C.	122 Industrial Road, Whitehorse, Y.T., Y1A 2T9	667-2235	120
Yukon-Arctic	122 Industrial Road, Whitehorse, Y.T., Y1A 2T9	667-2235	110
Alsek-Taku	Box 5341, Haines Junction, Y.T., Y0B 1L0	634-2235	130



Salmon Spawning Streams of Mission/Harrison Subdistrict

1. BIG SILVER CREEK
2. BOUCHIER CREEK
3. CHEHALIS RIVER
4. CHILQUA SLOUGH (Thompson Creek)
5. COGBURN CREEK
6. (Coho Creek)
7. DRAPER CREEK
8. (East Creek)
9. HARRISON RIVER
11. (Hicks Creek)
12. (Inch Creek)
13. LAGACE CREEK
14. MAHOOD CREEK (Gallagher Creek, Johnson Slough)
15. MARIA SLOUGH
16. MIAMI CREEK
10. MOUNTAIN SLOUGH
17. MYSTERY CREEK
18. NICOMEN SLOUGH
19. NORRISH CREEK
21. PYE CREEK
22. RUBY CREEK
23. SCOREY CREEK (Rouleau Creek)
24. SIDDLE CREEK (Bell's Creek, Tatham Creek)
25. SILVERDALE CREEK (Silver Creek)
27. (Squakum Creek)
28. STAVE RIVER
29. STEELHEAD CREEK
30. SAKWI CREEK
31. TROUT LAKE CREEK (Hatchery Creek)
32. TWENTY MILE CREEK
33. WEAVER CREEK
34. WHONNOCK CREEK
35. (Wilkinson Creek)
36. (Worths Creek)
Harrison Lake
Stave Lake
Langley
Fraser River
Chilliwack
N

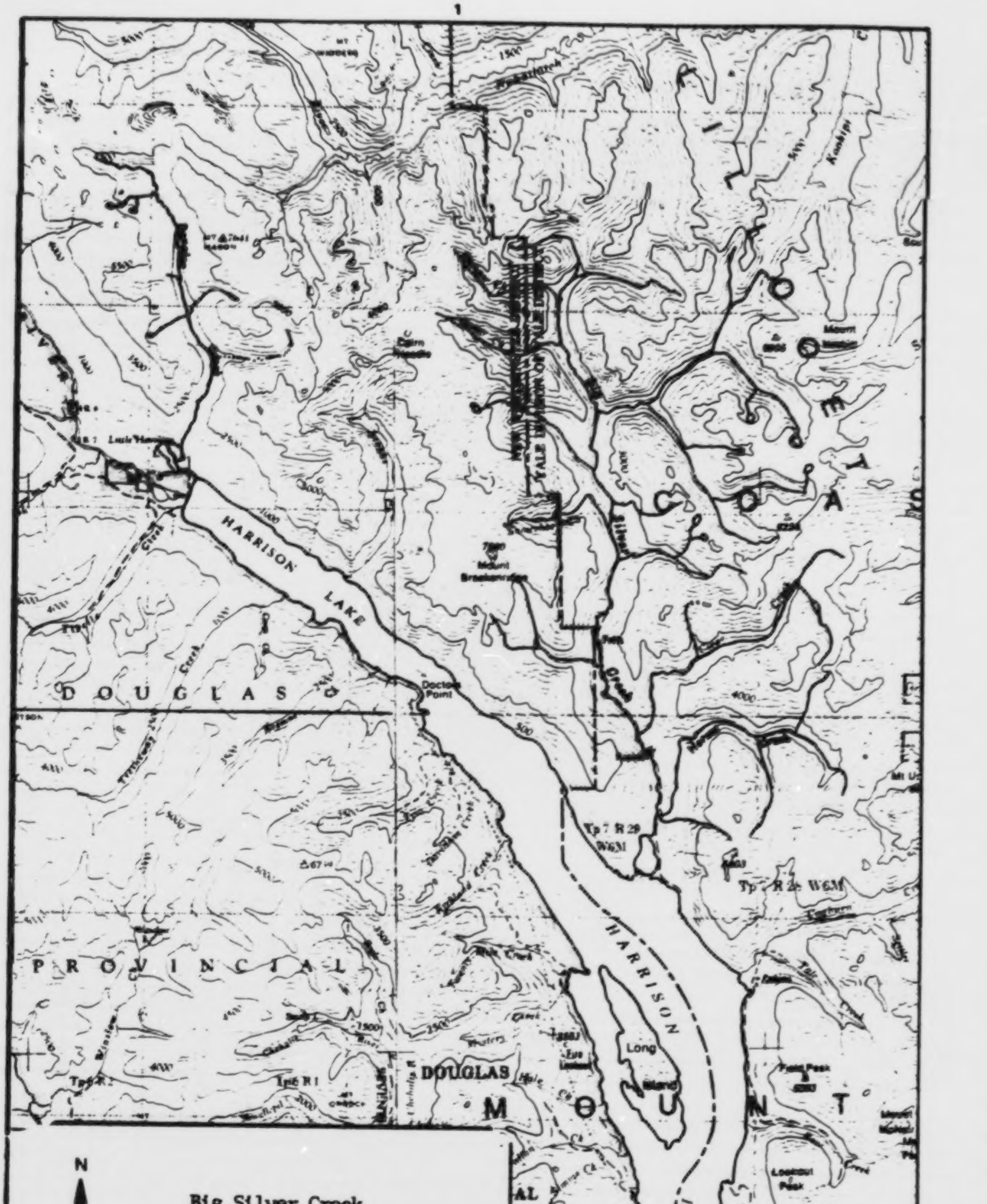
SUMMARY

ESCAPEMENT RECORD FOR STATISTICAL AREA 29 - MISSION-HARRISON

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947	44,000	1,700	800	80,550	125,200	50
48	37,775	1,725	475	147,125		
49	15,775	3,900	10,275	94,850	53,100	
50	50,050	975	6,025	125,450	25	750
51	19,125	2,050	7,225	87,275	95,200	2,000
52	38,150	76,175	26,904	83,600		850
53	18,950	15,475	25,450	93,750	114,275	1,925
54	50,225	16,000	16,925	56,750	25	4,000
55	42,725	8,200	8,325	80,700	163,150	75
56	16,525	3,875	5,675	22,175		200
57	18,900	3,925	14,200	60,775	270,275	600
58	52,375	16,600	7,700	75,500		400
59	37,030	18,150	8,350	126,800	118,295	50
60	28,807	3,875	10,125	79,570		400
61	47,659	5,175	12,725	50,475	203,616	275
62	24,790	2,450	22,475	65,875		275
63	36,870	13,859	6,875	88,400	660,693	250
64	7,548	6,100	15,850	85,525		450
65	26,817	8,750	12,835	81,325	77,871	100
66	53,218	9,219	23,361	240,600		75
67	30,250	7,800	13,200	128,075	84,675	125
68	12,700	7,700	10,050	247,675		
69	50,425	7,975	11,550	225,750	14,950	
70	18,800	7,775	15,650	185,025		
71	7,275	15,175	22,075	119,250	117,400	
72	37,475	15,475	5,400	200,250		
73	39,350	35,475	11,275	124,375	20,200	
74	90,900	35,300	11,800	196,925		
75	38,625	15,075	16,000	93,775	92,075	
76	84,025	7,575	12,825	155,700		
77	60,725	25,325	14,975	200,775	169,575	
78	91,650	15,300	8,200	142,975		
79	111,325	15,175	9,925	169,600	36,800	
80	81,575	10,170	9,915	139,800		
81	47,420	20,120	4,258	306,694	320,777	
82	310,667	22,080	5,540	211,195		25
83	26,019	6,125	2,625	290,860	153,890	
84	62,037	15,080	12,937	379,295		
85						
TIMING:						
ARRIVE						
START						
PEAK						
END						

REMARKS

1


HARRISON LAKE
Doctors Point
Mount Breckenridge
Tp 7 R 29 W6M
DOUGLAS
PROVINCIAL
DOUGLAS
MOUNT
HARRISON
LAKE
Long Island
Lookout Peak
Cascade Peninsula
N
Big Silver Creek
0
10
kilometres

NAME OF STREAM BIG SILVER CREEK RAB NO. 01-1800

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 121 NW.

LOCATION OF MOUTH Flows S. into Harrison L., Yale Dist.

LENGTH *8.8 km WIDTH 12 m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature ($^{\circ}$C)

COMPOSITION: Bedrock 1% Boulder 40% Coarse 28% Fine 23%

Silt & Sand 5% Unclassified 3% pools

Barriers or Points of Difficult Ascent:

Impassable canyon falls 5m high 6-10 km from mouth. Some good spawning gravel above falls.

SPAWNING DISTRIBUTION

Species	Section of Stream Used
SOCKEYE	- throughout West Fork
CHINOOK	- throughout
COHO	- most spawning in lower river and in Hornet Creek
CHUM	- throughout

GENERAL REMARKS

Physical Conditions:

1950 Reported heavy silting over 40% of sockeye spawning gravel.

1951/59 Only slight silting 10/20%. Usual seasonal fluctuations in water levels.

1960 Erosion and silting over 90% of spawning grounds. 61/69 Erosion and silting ranged from 10-75%. High water levels and subject to flash floods.

1970/79 1975 Reported 75% erosion and silting. Some scouring during heavy run-off (70/74)

1980/84 Only slight erosion and silting, normal water levels.

General Comments:

1951 Many acres of very good gravel, excellent potential.

1952/54 This watershed is being logged off at a very rapid rate by American interests resulting in stream instability.

1960 Chinook run below average — very poor egg survival as a result of drastic scouring in Jan.

1963/66 Much of forest cover has been removed from this valley. Flash flooding and very low water levels early in year. Spawning grounds have divided into two channels.

1969/74 Escapements include Hornet Creek.

1979 Approx. 75% loss of spawners due to mid December floods. 1983 30% loss due to heavy rains.

1984 Heavy snow made access a problem for the latter run of chum and coho to be enumerated. Helicopter needed for successful count.

BIG SILVER CREEK

Hornet Creek runs into the Big Silver at 3.2km from mouth. It is accessible for 1.2km, is 7m wide and approx. 25% of the stream bed is suitable for spawning. The south arm of this creek has some underground spring water.

*Creek becomes impassable at 6km, but the west fork is 2.4 km long and this has been added to the accessible length.

ESCAPEMENT RECORD FOR BIG SILVER CREEK

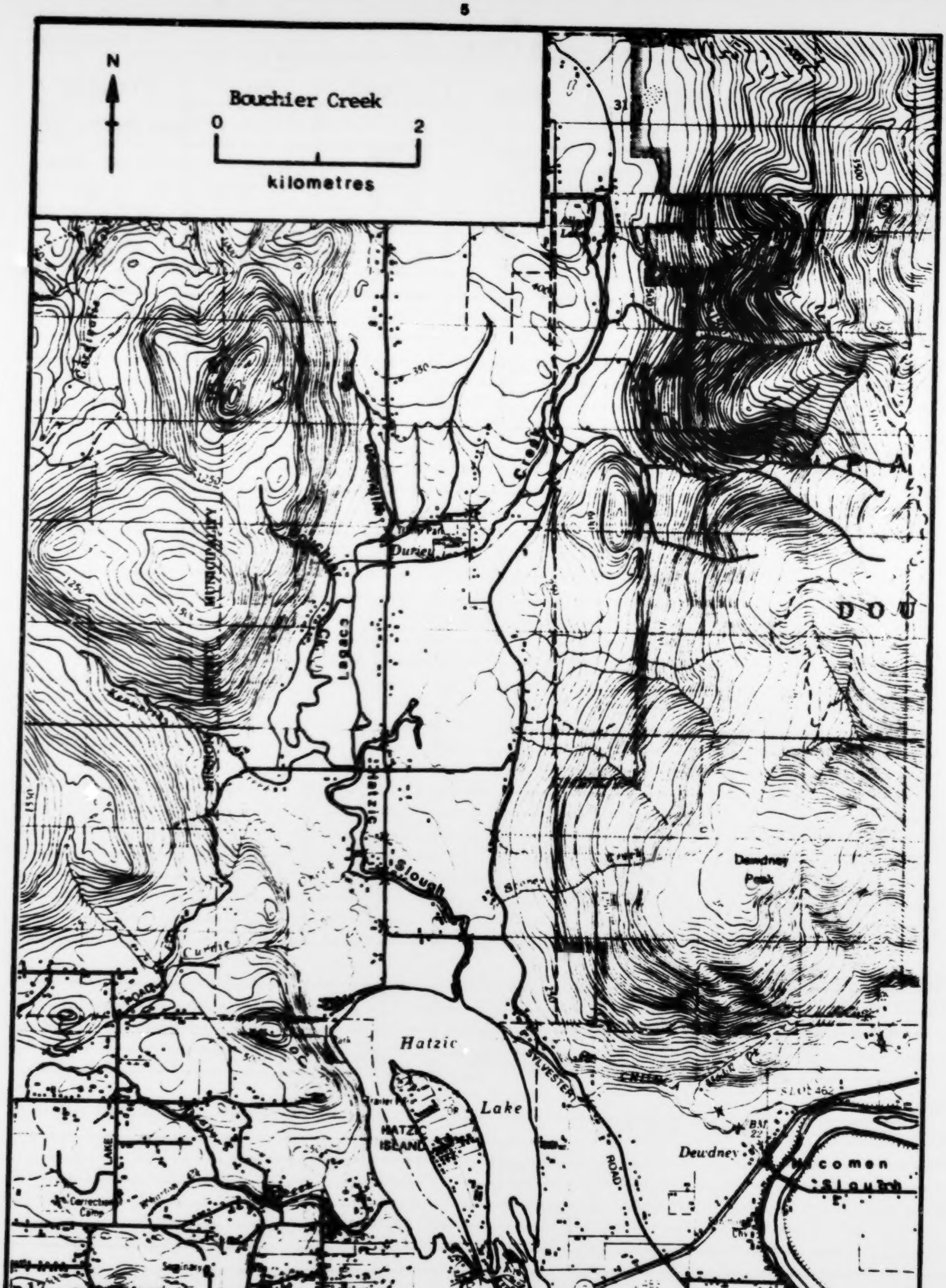
YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48	7500	25				
49	750	UNK	UNK	UNK		
50	25	25				
51	200	75	200	75	75	200
52	7500	200				
53	400	200	25	25	25	25
54	200	75	UNK	UNK	UNK	UNK
55	200	75				
56	7500	300				
57	400	200		75	25	
58	25	25				
59	64	75	UNK	UNK		
60	4522	300	UNK	UNK		
61	398	75	UNK	25	25	
62	400	50	UNK	UNK		
63	64	24	UNK		200	
64	3926	25	UNK	200		
65	596	50		25	25	
66	350	25		25		
67	25	25	75	25	75	25
68	1500	25	200	200		
69	200	75	200		200	
70	200	75	200			
71	200	75	200	25		
72	1500	200	75	200		
73	750	200	75	25		
74	750	200	200	25		
75	400	75	75	25		
76	1500	25	200	75		
77	1500	75	200	75		
78	1500	25	75	200		
79	400	75	75	75	-	-
80	500	20	100	50		
81	200	100	50	100		
82	2000	20	UNK	20		
83	230	75	UNK	UNK		
84	155	50	UNK	UNK		
85						

TIMING:

Arrive	SEP	AUG-SEP	SEP-OCT	OCT		
Start	M. SEP	SEP	SEP-OCT	OCT		
Peak	E. OCT	SEP-L. OCT	NOV-DEC	OCT		
End	M. OCT	OCT-M. NOV	DEC-JAN	NOV		

REMARKS

1983/84 Sockeye figs from I.P.S.F.C.


N
Bouchier Creek
0
2
kilometres
Durieu
Lagace
Hatzic
Slough
Creek
DOU
Dewdney
Peak
Hatzic
Lake
HATZIC
ISLAND
SYLVESTER
ROAD
Dewdney
Nicomen
Slough
Correctional
Camp
Hatzic
D 17
CM

NAME OF STREAM BOUCHIER CREEK RAB NO. 00-0500-050-010

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 122 SE.

LOCATION OF MOUTH Flows S. into Kenworthy Cr., N. of Hatzic Lake, New Westminster Dist.

LENGTH 3.2 km WIDTH 4.6 m DRAINAGE km^2

DISCHARGE (m^3/s) MAX 1.47 Nov. 26,1963 MIN 0.017 Jan. 22, 1960

Temperature (°C) 6.7 (Feb. 22, 71)

COMPOSITION: Bedrock Boulder 20% Coarse 30% Fine 25%

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

Impassable after 1.6km — high land.Creek becomes very narrow at 3.2km and tends to become jammed with logs and debris at this point.

SPAWNING DISTRIBUTION

Species	Section of Stream Used
COHO	- scattered throughout upper reaches
CHUM	- evenly distributed from mouth to falls

GENERAL REMARKS

1952	Salmon migrating up and down this stream pass through Hatzic Pumping Station.
1956	Forest cover being removed by local farmers.Plenty of good gravel and water conditions have remained stable.
1957/61	This fine stable stream is being lost because of land development along its banks.
1967	Increased population and land development have all but destroyed this system — the last remaining chum producer in Hatzig watershed.
1979	75% egg loss from mid-December floods.
1983	Chum return up slightly from brood year. 50% loss due to heavy rains Jan. 1984
1984	Stream is showing signs of agricultural development and domestic water use.

The streambed at the mouth of Bouchier Creek is composed of mud and silt. The best spawning ground in the creek is from Durieu to 1.6km upstream.

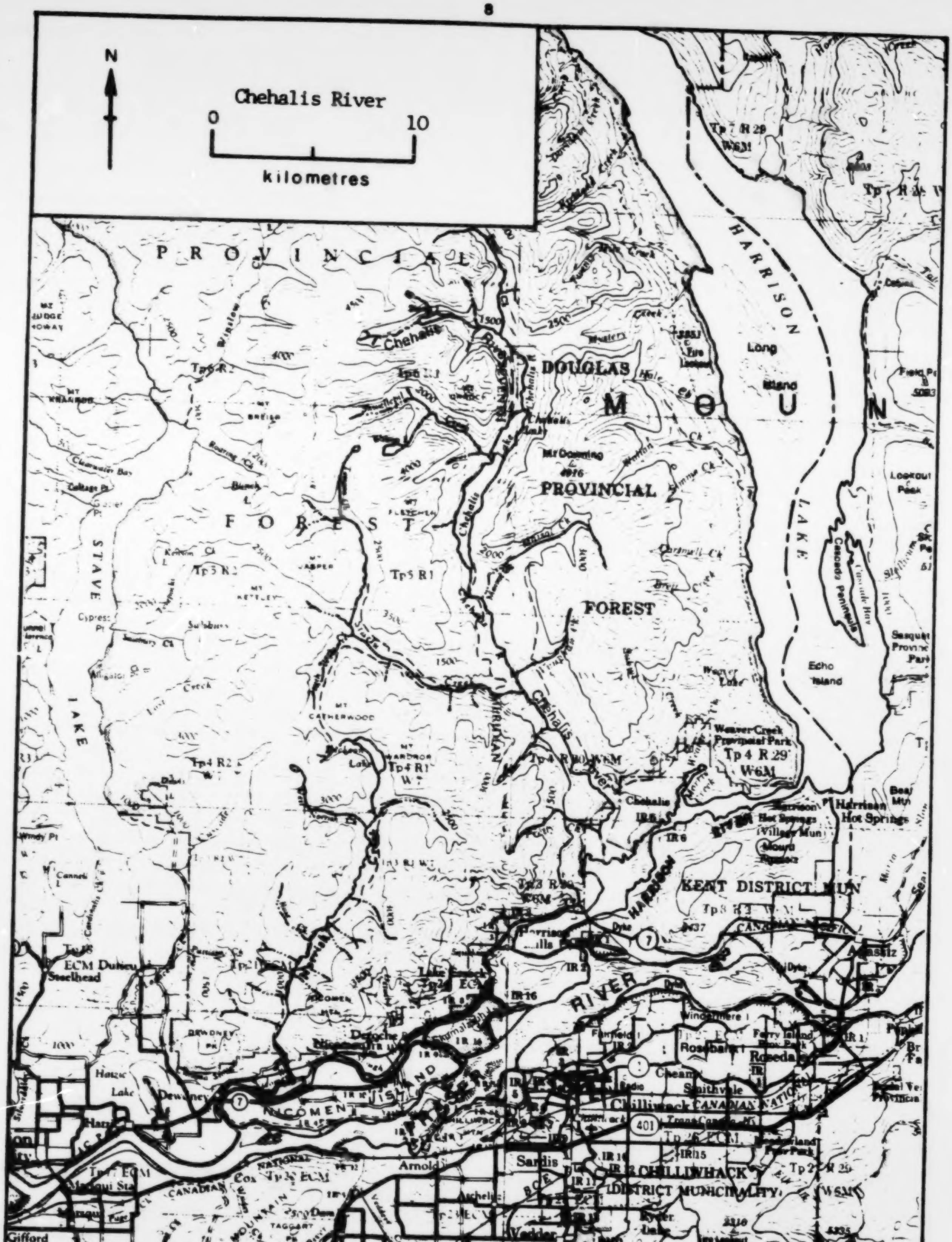
ESCAPEMENT RECORD FOR BOUCHIER CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			25	25	25	
48			N/O	400		
49			75	400		
50			25	400		
51			25	750		
52			25	200		
53			25	750		
54			75	200		
55			25	400		
56			25	200		
57			75	750		
58			25	400		
59			25	75		
60			25	200		
61			25	200		
62			25	200		
63			UNK	125		
64			UNK	200		
65			25	280		
66			25	750		
67			25	25		
68			25	400		
69			25	400		
70			25	200		
71			25	75		
72			25	400		
73			25	400		
74			25	75		
75			25	75		
76			25	400		
77			25	400		
78			25	200		
79			25	400		
80			25	750		
81			10	1150		
82			25	425		
83			10	465		
84			25	950		
85						

TIMING:

Arrive			OCT-DEC	SEP-OCT		
Start			OCT-DEC	SEP-OCT		
Peak			NOV-DEC	OCT-NOV		
End			L. DEC-JAN	NOV-DEC		

REMARKS


N
Chehalis River
0
10
kilometres
PROVINCIAL
DOUGLAS
M O U N
PROVINCIAL
FOREST
F O R E S T
HARRISON
LAKE
STAVE
LAKE
Long Island
Cascade Peninsula
Echo Island
Mt Downing
Weaver Creek Provincial Park
Tp 4 R 29 W6M
Tp 7 R 29 W6M
Tp5 R1
Tp5 R2
Tp4 R2
Tp4 R1
Chehalis
Harrison Hot Springs
KENT DISTRICT MUN
Agassiz
Harrison Mills
RIVER
Deroche
Nicomen
NICOMEN ISLAND
Dewdney
Hatzic Lake
Rosedale
Cheam
Chilliwack
Sardis
CHILLIWACK DISTRICT MUNICIPALITY
Vedder Crossing
Cultus Lake
Chilliwack River Provincial Park
Arnold
Sumas
Yarrow
Straiton
Clayburn
Kilgard
Gifford
Matsqui
Mt Thurston
DND
Lookout Peak
Weaver Lake
Stave
Cypress Pt
Windy Pt
Steelhead
Durieu
Ryder Lake
Rosebank
Fairfield I
Smithvale
Popkum
7
1
401

NAME OF STREAM CHEHALIS RIVER RAB NO. 01-0400

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 121 SW.

LOCATION OF MOUTH Flows S. into Harrison River, New Westminster Dist.

LENGTH 19 km WIDTH 27 m DRAINAGE 379 km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

Lake system at 20km. Impassable falls 9m high at 1.2km on Skwellepil Creek (tributary flowing into Chehalis L.)

Beaver dams monitored and removed as required.

Upper Chehalis 9m impassable falls at 6km above Chehalis Lake.

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chum	- throughout delta area
coho	- mostly below Lake and Pretty Flats area
chinook	- scattered throughout mainstem

GENERAL REMARKS

Construction of major hatchery facility on this river began in 1982. First year of production 1983.

Physical conditions- Subject to scouring during high water in December. Considerable stream changes from canyon to mouth — unstable delta.

1950/59 Some changes in stream during winter may lead to considerable damage from Spring freshets (54). Stream should be surveyed with a view to establishing a stable channel through the delta (55).This river used to be a major producer of pink salmon. Logging off the watershed is a major cause of the depletion of this run (59).

1960/69 Chum redds suffered at least 30% loss through flood damage. 1965 reports pink run very poor due to flood damage to 1963 redds. This stream and vicinity is subject to extensive study by R.D.Branch and I.P.S.F.C.(67)This area, if prepared and silt removed, would make a very fine spawning ground for a huge number of chum. (68,69)

1970/79 Chum used the flats to quite an extent this year (74)

1984 Coho in Pretty flats are best enumerated by foot, whereas chum in the mainstem are best enumerated by helicopter. Pools are difficult to enumerate due to poor access, but probably hold a fair amount of coho. The main run of coho did not arrive until around Jan 18, 1985, therefore the coho total may be amended as current data comes available.

New Chehalis River Hatchery commenced in 1982. Enhanced species include: chinook,coho and chum salmon and steelhead trout.

ESCAPEMENT RECORD FOR CHEHALIS RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			200	35000	75000	
48			LIGHT	35000		
49			3500	35000	7500	
50	25	UNK	3500	35000		750
51	25	400	3500	35000	15000	1500
52	400	750	7500	35000		UNK
53	25	75	15000	7500	35000	1500
54		750	7500	15000	25	3500
55		400	3500	35000	75000	UNK
56		N/O	2500	3500		UNK
57		25	7500	3500	11500	UNK
58	25	25	3500	30000		UNK
59		25	3500	50000	6700	UNK
60		25	7500	35000		UNK
61	25	25	7500	15000	11921	UNK
62		200	15000	28000		UNK
63		25	3500	28000	12394	UNK
64		25	8000	23500		UNK
65		25	7500	27000	7621	UNK
66		25	15000	35000		UNK
67		25	7500	35000	7500	
68		75	3500	75000		
69		N/O	3500	35000	3500	
70		N/O	7500	15000		UNK
71		25	7500	35000	35000	UNK
72		75	1500	35000		UNK
73		75	1500	35000	15000	UNK
74	25	25	1500	35000		UNK
75		25	750	35000	15000	UNK
76		25	750	35000		
77		25	1500	45000	35000	
78		25	1500	100000+		
79	25	25	3500	15000	35000	UNK
80	25	25	800	20000	-	-
81	-	-	600	63150	200	UNK
82	UNK		1000	20000	-	UNK
83			300	26000	700	UNK
84	N/O	N/O	5000	48000	-	UNK
85						

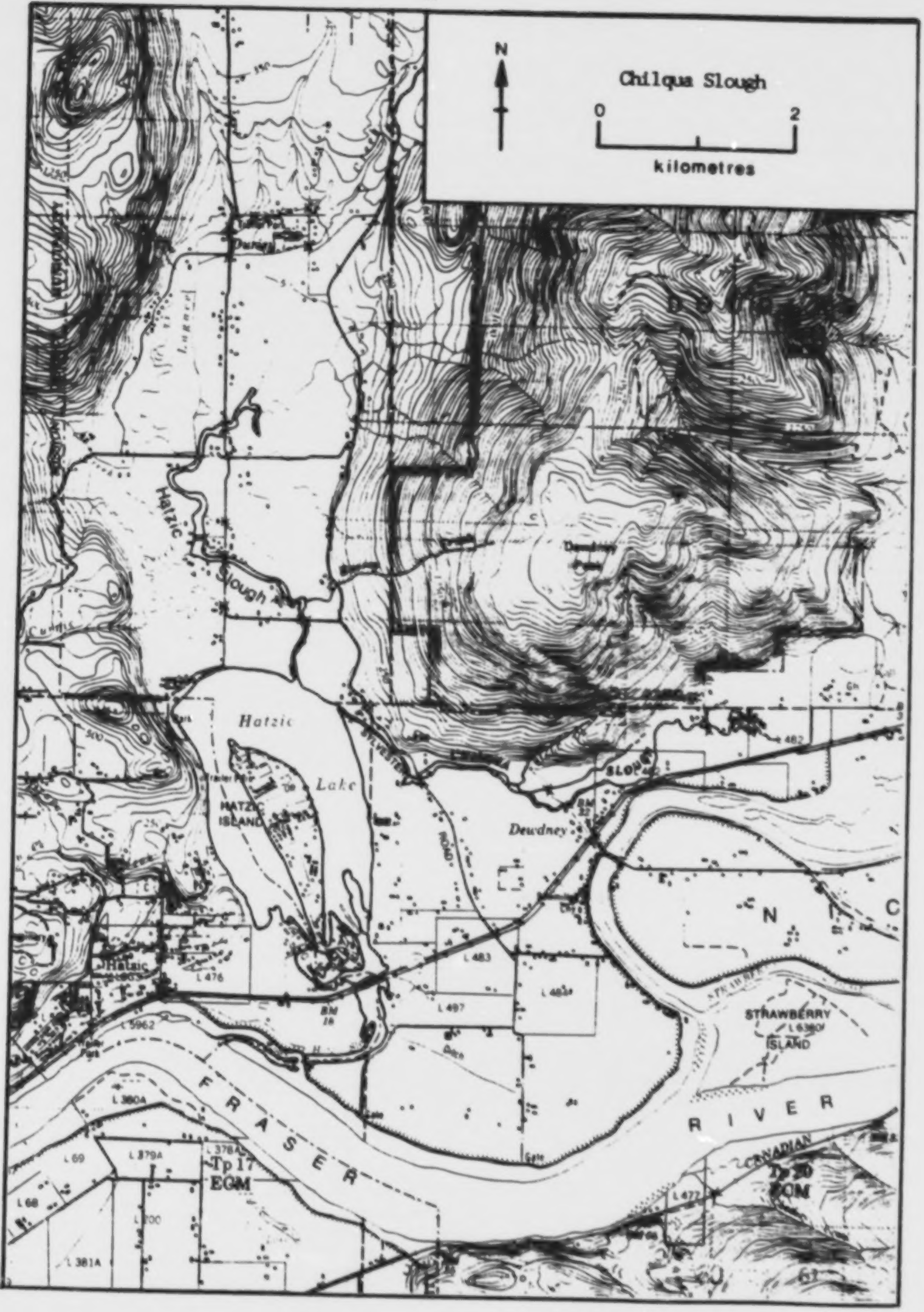
TIMING:

Arrive		MAY	SEP-NOV	SEP	SEP	
Start		MAY	SEP-NOV	SEP-OCT	SEP	
Peak		JUN	DEC-JAN	NOV	OCT	
End		AUG	DEC-L. MAR	DEC-JAN	NOV	

REMARKS

1976/84 Totals do not include 3B or other sloughs which are now included in Harrison System.

1984 Totals include Pretty Flats.


N
Chilqua Slough
0
2
kilometres
Hatzic
Slough
Hatzic
Lake
HATZIC
ISLAND
Dewdney
SLOUGH
Hatzic
N
C
L 483
L 476
L 497
L 5962
STRAWBERRY
ISLAND
F R A S E R
R I V E R
L 380A
L 379A
L 378A
Tp 17
EGM
L 69
L 68
L 200
L 381A
L 477
CANADIAN
Tp 20
ECM
500
BM
16
BM
22

NAME OF STREAM CHILQUA SLOUGH RAB NO. 00-0500-020
LOCAL NAME (Thompson Creek)
DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 122 SE
LOCATION OF MOUTH E. of Hatzic Slough, N. of Fraser R., New Westminster Dist.

LENGTH 4 km WIDTH 13 m DRAINAGE ________ km^2
DISCHARGE (m^3/s) MAX ________ MIN ________
Temperature (^{o}C) ______
COMPOSITION: Bedrock ______ Boulder 2% Coarse 10% Fine 15%
Silt & Sand 70% Unclassified 3%

Barriers or Points of Difficult Ascent:

ground water system at 2km — beaver dams provide good habitat, removed during migration

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chum	- mostly above Catherwood Rd.
coho	- in pools throughout

GENERAL REMARKS

Physical conditions: Slight to moderate silting, scouring during heavy rain. Seasonal fluctuations in water levels.

1950^{s} Runs to this stream are continuing to decrease. Salmon migration passes through Hatzic Pumping Station. Land clearance resulting in loss of protective cover.Swamp clearance planned in coho spawning area (54) Stream is fast becoming a drainage ditch(58).

1960^{s} Once a very good producer, the runs to this area are now almost extinct. Water used for irrigation of adjacent farmland (67,69)

1970/76 Water used for irrigation. 1979 25% egg loss due to mid December floods.

1981 Some silting mid-portions. Three drainage ditches also contain fish. Lower reaches heavy vegetative growth (2,350 chopped)

1982 Upper reaches would be a suitable enhancement project.

1984 Spawning channel installed at headwaters. Stream walked 10 times.Dead pitched by Inch Cr. hatchery staff.

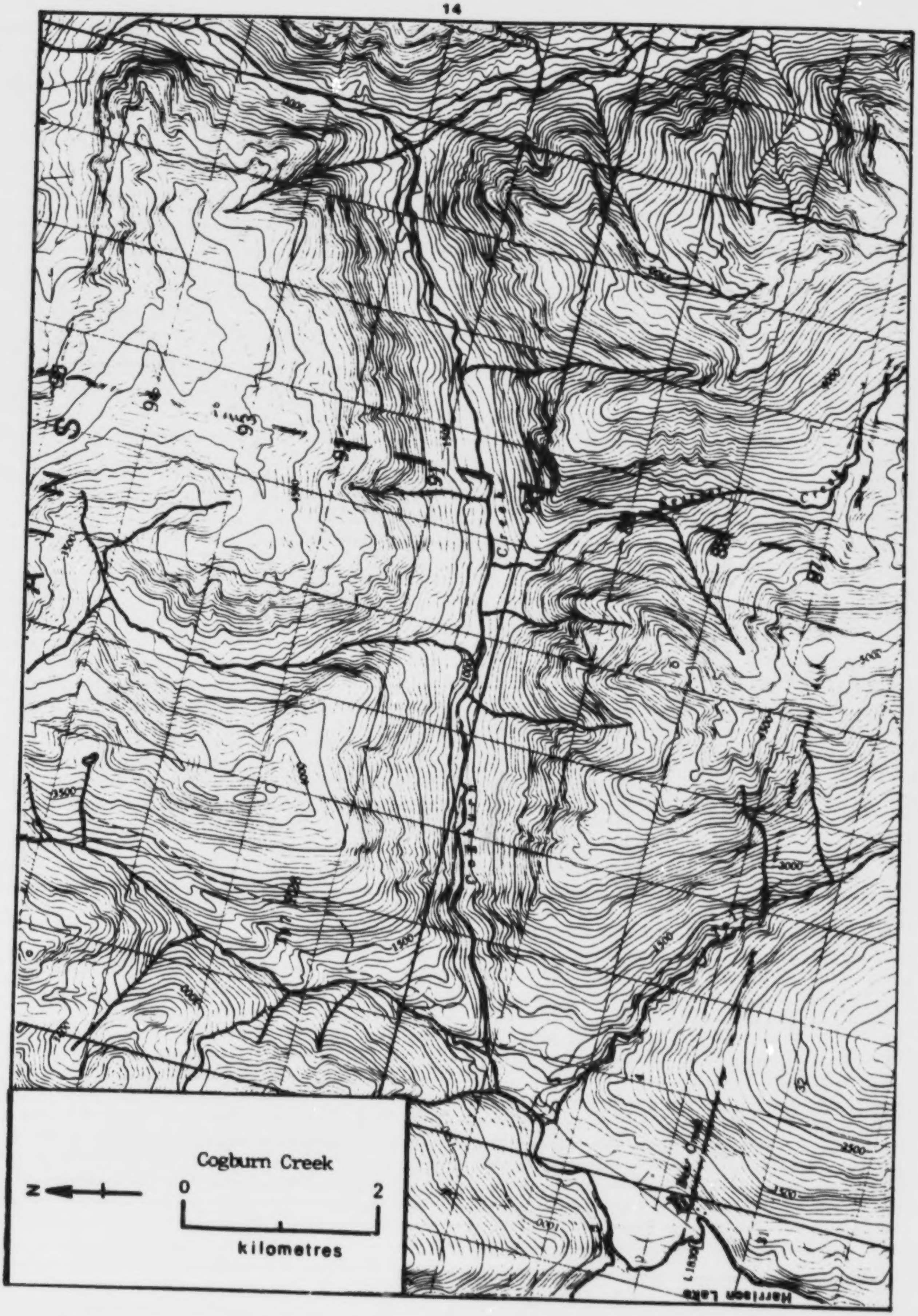
ESCAPEMENT RECORD FOR CHILQUA SLOUGH (Thompson Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			25	200		
48			N/O	25		
49			200	25		
50			25	75		
51			75	200		
52			200	25		25
53			25	25		
54			25	25		
55			25	25		
56			UNK	N/O		
57			25	25		
58			25	25		
59			25	25		
60			25	25		
61			25	25		
62			25	25		
63			25	25		
64			75	25		
65			25	25		
66			25	25		
67			25	75		
68			75	750		
69			75	400		
70			75	400		
71			75	750		
72			75	200		
73			25	200		
74			25	750		
75			75	750		
76			25	25		
77			25	1900		
78			N/O	750		
79			25	200		
80			100	1500		
81			50	2800		
82			75	1500		
83			N/O	6500		
84			50	9500		
85						

TIMING:

Arrive			E. NOV-DEC	OCT-NOV		
Start			NOV-DEC	OCT-NOV		
Peak			DEC	NOV		
End			JAN-M. FEB	DEC		

REMARKS


Cogburn Creek
N
0
2
kilometres
Harrison Lake
Creek
Creek
Creek
96
93
91
89
88
87
2000
1500
2500
1000

NAME OF STREAM COGBURN CREEK RAB NO. 01-1600

LOCAL NAME (Fifteen Mile Creek)

DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 121 NW

LOCATION OF MOUTH Flows W. into Harrison Lake, Yale Dist.

LENGTH 2.4 km WIDTH 7.6 m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C) 2.7 (Feb. 17/71)

COMPOSITION: Bedrock Boulder 84% Coarse 8% Fine 3%

Silt & Sand 1% Unclassified 4% pools

Barriers or Points of Difficult Ascent:

Impassable 4.5m falls 2 km from mouth
(except for Steelhead)

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chum	- in Harrison L. off mouth of creeks.
steelhead	- scattered over stream from mouth to 10 km upstream
chinook	- mid portion of stream

GENERAL REMARKS

Physical conditions: Stream subject to flash flooding - 1960 reported erosion and silting to 90% of spawning grounds — serious scouring. 1980/84 reported slight erosion and normal water levels.

1950/59 All species were reported as being present in this stream in most years. Stream has been severely damaged by logging (54)

1960/69 Logging has made this an unstable stream. Floods in 1961 destroyed most redds. Infrequent inspections due to transportation problems. Most information from local loggers and anglers.

1970/79 Low water conditions in fall prevent access by patrol boat.

1981 Strong possibility that many chum spawn in Harrison Lake off mouth of creeks with suitable lake shore.

Predation by birds, bears, seal and public.

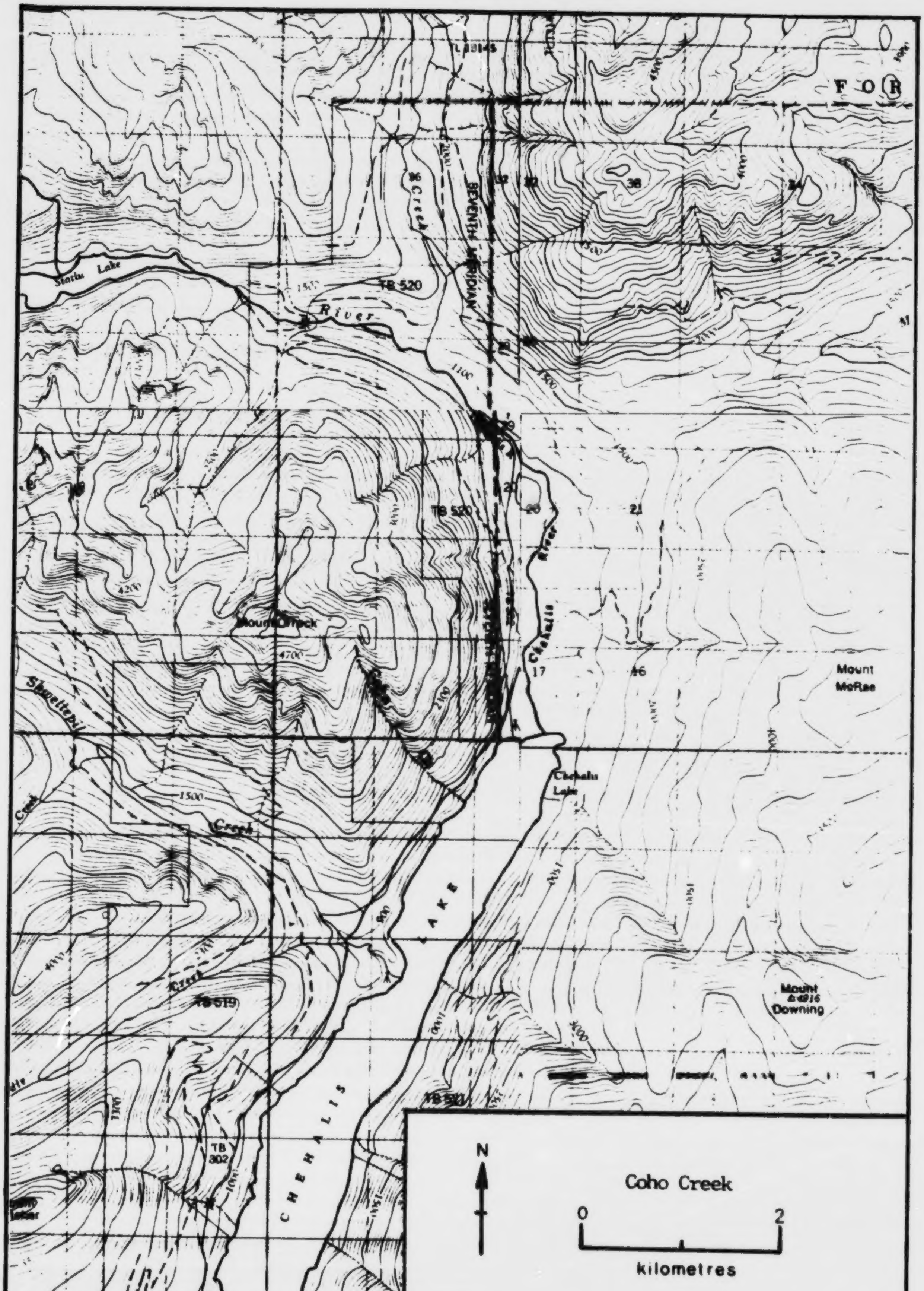
ESCAPEMENT RECORD FOR COGBURN CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947*						
48				200		
49*						
50*						
51*						
52	200	UNK	UNK	200		
53*						
54	25	25	UNK	UNK		
55*						
56*						
57					75	
58						
59						
60	189					
61	25	25		25	25	25
62						
63	25			25		
64	25					
65						
66	25	25	25	25		25
67	25	25	25	25		75
68				25		
69						
70						
71						
72	25					
73						
74						
75	25					
76						
77		25	25	25		
78		25	25	25		
79			N/O	N/O		
80		25	25	25		
81			25	25		
82		10	25	25		UNK
83			N/O	N/O		
84			UNK	UNK		
85						

TIMING:

Arrive	AUG-SEP	SEP	OCT	OCT		
Start	AUG-SEP	OCT	OCT	OCT		
Peak	SEP-OCT	OCT	NOV	NOV		
End	SEP-OCT	NOV	JAN	DEC		

REMARKS


F O R
Statlu Lake
River
TB 520
Creek
SEVENTH MERIDIAN
1500
1100
Mount Orrock
4700
4200
Creek
Chehalis River
Chehalis Lake
Mount McRae
LAKE
CHEHALIS
Mount Downing
4916
TB 519
TB 521
TB 302
N
Coho Creek
0
2
kilometres

NAME OF STREAM (Coho Creek) RAB NO. 01-0400-080

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 122 SE

LOCATION OF MOUTH Flows E. into Chehalis L., New Westminster Dist.

LENGTH 1.2 km WIDTH 2.74 m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C)

COMPOSITION: Bedrock Boulder 6% Coarse 21% Fine 39%

Silt & Sand 29% Unclassified 5% logs

Barriers or Points of Difficult Ascent:

Spring fed creek. Impassable after .80km because of steep gradient. Continual problem of floating debris at mouth. If not cleared prevents migration. Cleared '81 season by Elbow Lake Institution.

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- throughout

GENERAL REMARKS

1954/59 This is an excellent spawning stream. Excellent gravel and forest cover — good flows all summer. The stream forms a series of shallow ponds ideal for fry. Low water in Chehalis L. prevented run from entering stream for 2 weeks in '57.

1960/69 A very fine small stream producing large coho (61,62) Logging operations along and across stream at peak spawning (63). Removal of forest cover has seriously affected this stream.

1970/79 Forest cover is returning and stream is in good condition. 1970 Extra spawning area was provided by stream improvement and removal of debris. Small steady producer (77). Log jam near the top end of Chehalis River blocked most of the fish making the run later this year. 1979 Heavy silting and damage to stream because of the flood on and around Dec. 14. Approx 25% of fish spawned before this date.

1982 Figures are from Chehalis Hatchery — probably more fish, but numbers unknown. Only two inspections done due to road washout.

1983/4 Heavy snowfall made access a problem — coho totals a rough estimate. 1983 reported 20% loss of spawn due to heavy rains in Jan. 1984.

1980/84 Water levels low in early season — coho hold in lake before migration.

ESCAPEMENT RECORD FOR COHO CREEK (Coho Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52		NO RECORDS PRIOR TO 1954				
53						
54			400			
55			N/O			
56			NO REC			
57			400			
58			400			
59			400			
60			400			
61			500			
62			400			
63			400			
64			350			
65			250			
66			600			
67			200			
68			200			
69			400			
70			750			
71			750			
72			400			
73			400			
74			400			
75			1500			
76			750			
77			1200			
78			1500			
79			750			
80			600			
81			250			
82			300			
83			150			
84			200			
85						

TIMING:

Arrive			OCT-NOV			
Start			NOV			
Peak			E-L. DEC			
End			L. JAN-FEB			

REMARKS

Draper Creek

See Lagace Creek p. 39

NAME OF STREAM DRAPER CREEK RAB NO. 00-0500-010

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 122 SE.

LOCATION OF MOUTH Flows SE. into Hatzic Lake, New Westminster Dist.

LENGTH km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

Impassable after .80km due to elevation

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- from mouth to road culvert
chum	- " " "

GENERAL REMARKS

Physical conditions: Heavy rainstorm on Dec. 14 caused considerable scouring and has altered stream bed flow in some areas. 75% loss. (70)
1982 Low water levels in early season preventing fish access.

General Comments:

1978 Stream contains much debris — trees, cans etc. Development of Neilsen Park alleviating the problem somewhat.

1981 New culvert and flood culvert installed in Feb. is handling any increased flow.

1982 Incubation box in place this season. If no problems will be used for coho enhancement.

1983 The creek has re-channelled due to the heavy rains. The intake is now dry. Work is to proceed next year. 90% loss of spawners due to heavy rains in January '84.

1984 Incubation box not in operation this year. Stream walked 6 times.

Predation by birds and man.

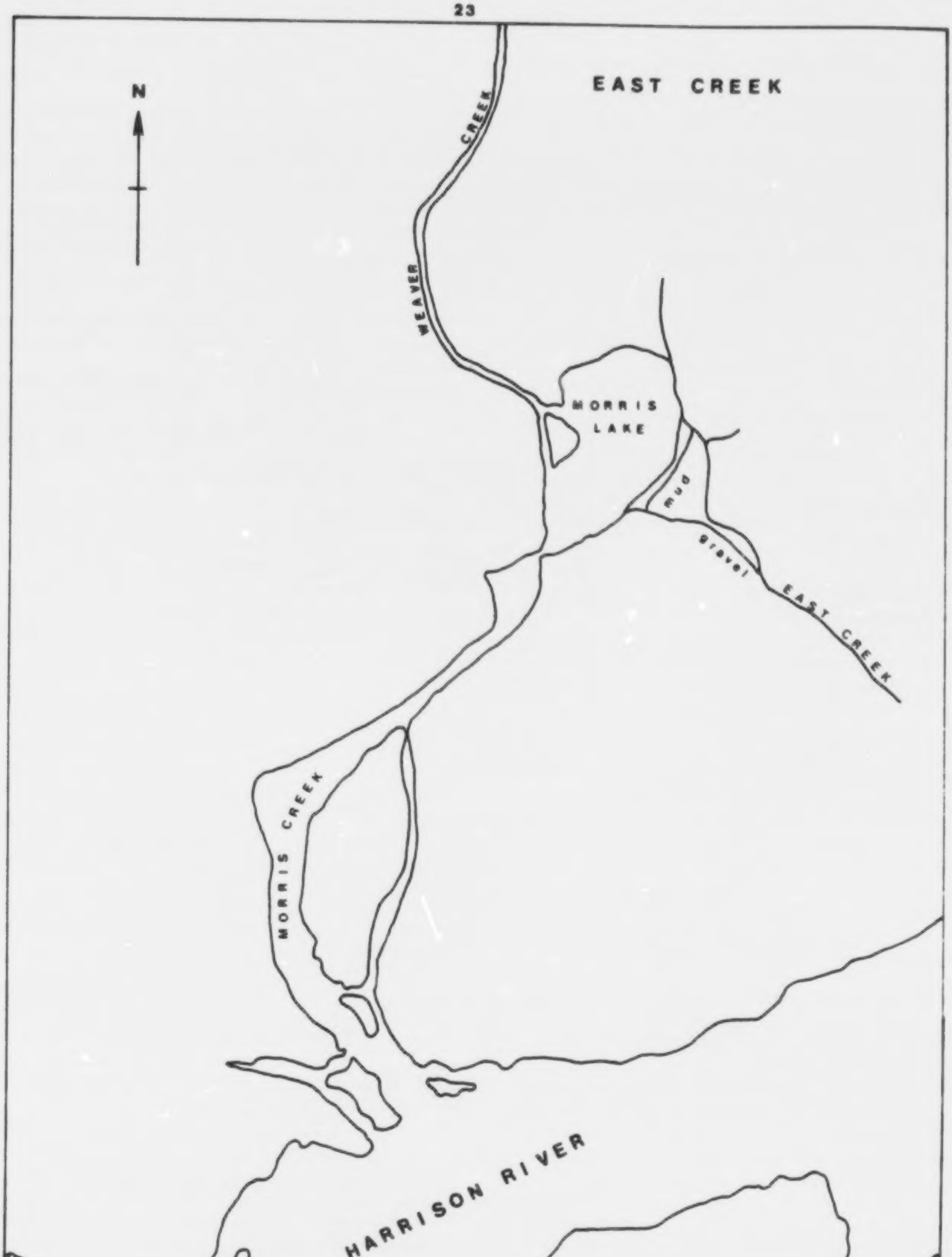
ESCAPEMENT RECORD FOR DRAPER CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78				25		
79			25	25		
80			25	25		
81			N/O	10		
82			15	20		
83			10	35		
84			10	300		
85						

TIMING:

Arrive			NOV-DEC	OCT-E. NOV		
Start			NOV-DEC	NOV		
Peak			L. NOV-DEC	NOV		
End			DEC	NOV-M. DEC		

REMARKS


EAST CREEK
N
WEAVER CREEK
MORRIS LAKE
mud
gravel
EAST CREEK
MORRIS CREEK
HARRISON RIVER

NAME OF STREAM (East Creek) RAB NO. –

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 121 SW

LOCATION OF MOUTH Flows NW. into Morris Lake, New Westminster Dist.

LENGTH 1.6 km WIDTH 4.5 m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C)

COMPOSITION: Bedrock Boulder 40% Coarse 15% Fine 20%
Silt & Sand 23% Unclassified 2% pools and logs

Barriers or Points of Difficult Ascent:

This stream has no potential for spawning above 1.6km as it has a very steep gradient.

SPAWNING DISTRIBUTION

Species	Section of Stream Used
sockeye chum	- some spawning was observed near the mouth during inspections of Weaver Creek

GENERAL REMARKS

1957 Very small stream with limited spawning area. A history of sockeye and coho, but habitat destroyed by logging.

1960/69 Stream may return to production as a result of Weaver Cr. spawning channel improving runs to the area (64)

Physical conditions:

1967/70 Only slight erosion silting and scouring.

1979 Heavy rainstorm in December caused considerable scouring to stream bed.

1984 Moderate silting.

Predation by birds 1981/84

ESCAPEMENT RECORD FOR (East Creek)

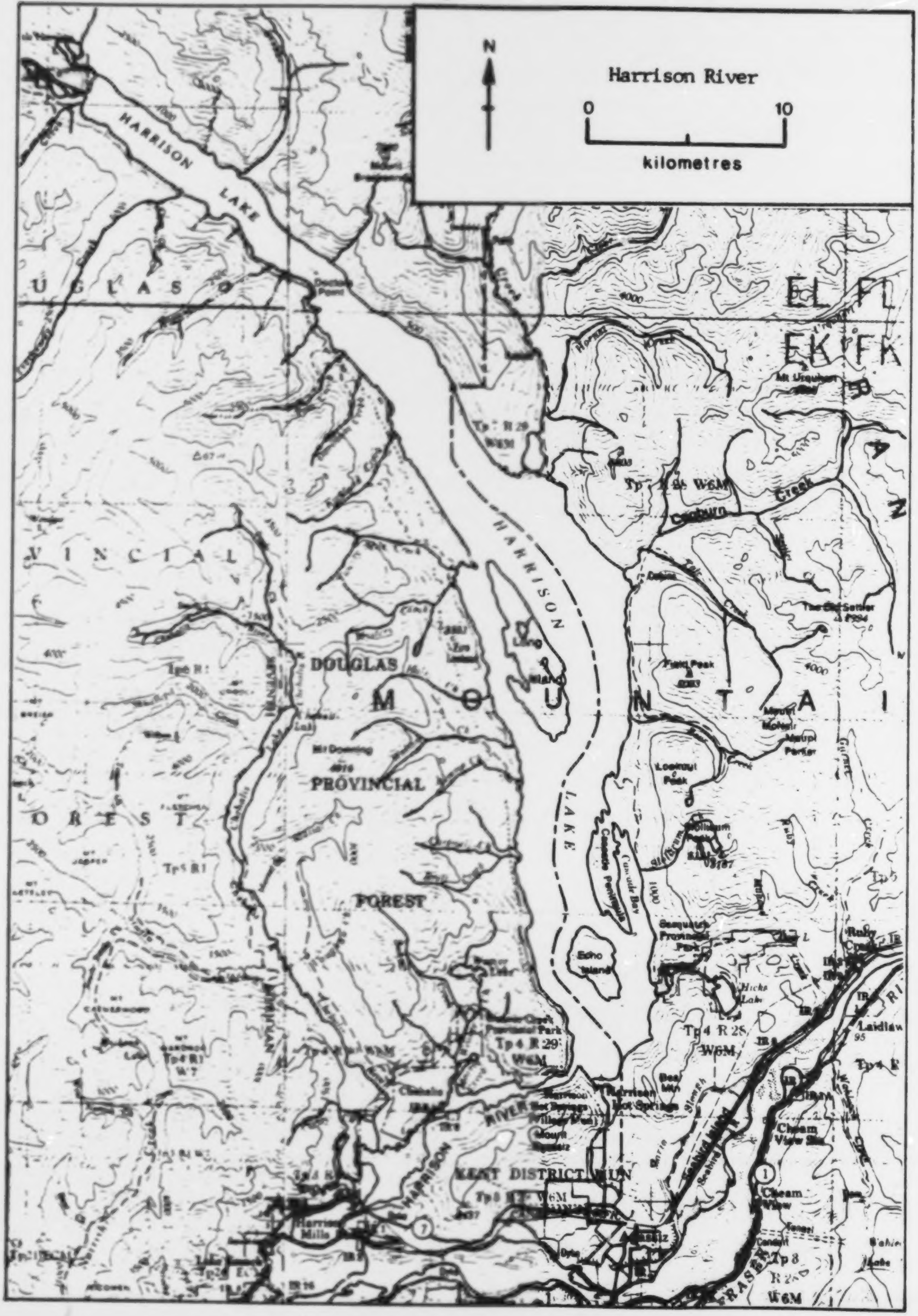
YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947*						
48	75					
49*						
50*						
51	200		25			
52*						
53*						
54*						
55	25					
56	25		25			
57*						
58	25		25			
59	25		UNK			
60	N/O		N/O			
61						
62	25		UNK			
63	N/O		N/O			
64	N/O		N/O			
65	25		25			
66	25		25			
67	N/O		N/O			
68	N/O		N/O			
69	N/O		N/O			
70	N/O		N/O			
71	N/O		25			
72	N/O		N/O			
73	N/O		N/O			
74	N/O		N/O			
75	N/O		N/O			
76	N/O		N/O			
77	25		25			
78	N/O		N/O			
79	N/O		N/O			
80	N/O		N/O			
81	20			50		
82	UNK			N/O		
83	UNK		-	250		
84	UNK		UNK	UNK		
85						

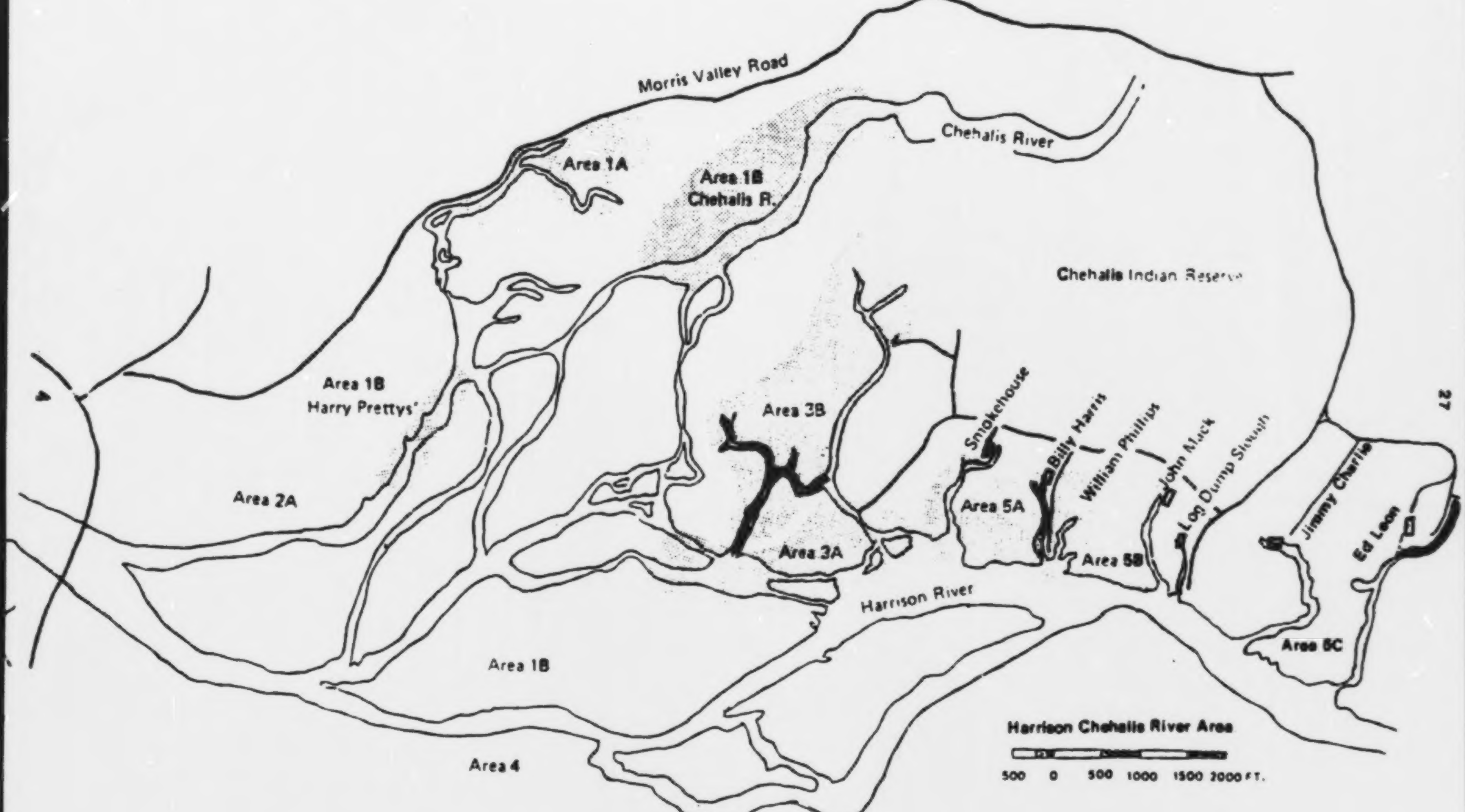
TIMING:

	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
Arrive	OCT			OCT		
Start	OCT			OCT		
Peak	OCT-NOV			NOV		
End	NOV			NOV		

REMARKS

* No records for these years


N
Harrison River
0
10
kilometres
HARRISON
LAKE
UGLAS
VINCIAL
ORES T
DOUGLAS
MOUNTAI
PROVINCIAL
FOREST
HARRISON
LAKE
Long Island
Cascade Bay
Cascade Peninsula
Echo Island
Sasquatch Provincial Park
Hicks Lake
Lookout Peak
Mount McNair
Mount Perkins
Mt Urquhart
The Old Settler
Cogburn Creek
Tp 4 R 29 W6M
Tp 4 R 28 W6M
Harrison Hot Springs
RIVER
HARRISON
KENT DISTRICT MUN
Tp 3 R 29 W6M
Harrison Mills
Chehalis
Agassiz
Seabird Island
Cheam View
Ruby Creek
Laidlaw
FRASER
Tp 3
R 28
W6M
EL
EK
BAN


Morris Valley Road
Chehalis River
Area 1A
Area 1B
Chehalis R.
Chehalis Indian Reserve
Area 1B
Harry Prettys'
Area 3B
Area 2A
Area 3A
Smokehouse
Billy Harris
William Phillips
John Mack
Log Dump Slough
Jimmy Charlie
Ed Leon
Area 5A
Area 5B
Area 5C
Harrison River
Area 1B
Area 4
4
Harrison Chehalis River Area
500 0 500 1000 1500 2000 FT.

SPAWNING AREAS OF THE HARRISON RIVER SYSTEM

NAME OF STREAM HARRISON RIVER

RAB NO. 01-0000-000-000-000-000-993

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 121 SW.

LOCATION OF MOUTH Flows SW. and SE. from Harrison L. into Fraser River, N. of Chilliwack, New Westminster Dist.

LENGTH 20 km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C)

COMPOSITION: Bedrock Boulder 10% Coarse 35% Fine 30%

Silt & Sand 25% Unclassified

Barriers or Points of Difficult Ascent:

Harrison Lake 20 km from mouth

SPAWNING DISTRIBUTION

Species	Section of Stream Used
sockeye chinook coho chum	-distributed throughout entire river — all adjacent channels and sloughs

GENERAL REMARKS

1950/59	Public Works Dept. maintained a dredged channel through the most productive section of the river. Gravel leases also pose a threat to this system (55).
1959/65	An undiagnosed disease killed off large numbers of spring salmon.
1962	Increased numbers of diseased chinook this year.
1963	Summer dredging has lowered winter water levels in sloughs and marginal areas reducing production in this valuable river.
1972	Log towing ceased voluntarily after it was shown that spawning ground were being damaged and fish disturbed. Work is underway to find a water level which will offer protection to redds and fish.
1976	Some dredging in summer just upstream from hwy. bridge.
1981	Enumeration best done by air. Reliable figures not achieved by any other methods.
1983	10 stream inspections of the Harrison River done this season.
1984	Sloughs and side channels along with mainstem walked 54 times and flown 10 times this year. Dry suits also were used this year with good results, especially when trying to distinguish species. Some coho spawning was noted in sloughs. There is a sizeable Indian Food Fishery on this stream geared to chum and chinook. Seal population increasing, also predation by bears, birds, dogs and man.

continued.....

continuation

HARRISON RIVER

Area 1A This channel has a clear groundwater supply from the Chehalis River and contains approximately 3344 sq. meters of spawning gravel.

Area 1B This area contains the Chehalis River from its mouth to 1.6km. In this section the Chehalis is broken into several channels which frequently change course. It contains approximately 33,440 sq. meters of spawning gravel.

Area 3A This area includes a section of small channels on the right bank of the Harrison River, just above its confluence with the Chehalis River. The spawning area available in these channels is dependent upon dis-change from the Harrison River — high flows creating extensive spawning areas and low flows creating minimal spawning areas. The average spawning area in these channels is approx. 5842 sq. meters.

Area 3B The 3B channel is the largest, most stable chum salmon producing area of the Harrison River. It comprises 30-40% of the chum escapements to the Harrison and Chehalis Rivers. The channel has an average discharge of 25 cfs. It contains 29,260 - 37,620 sq. meters of spawning gravel over 3.2km. It is supplied with groundwater from the Chehalis River which is 10 - 12 warmer than the Chehalis itself; 6° - 8°F warmer than the Harrison River.

Area 5A (Smokehouse Slough), 5B and 5C: This area covers a 2133 meter distance on the right bank of the Harrison River. The combined spawning area of the channels is 20,064 sq. meters. In 1977-78, improvement work was done on Billy Harris Slough by Salmon Enhancement Branch. The gravel was removed, washed and replaced; the banks were lined with rip rap to maintain the integrity of the spawning grounds; and the channel was divided by berms into 3 sections to maintain sufficient water levels for fish migration and spawning. The spawning area of this channel is 7849 sq. meters.

Billy Harris Channel developed in 1979 is a ground water fed spawning channel providing 7490 sq. meters of new and improved habitat.

Little Mountain (Ed. Leon) Channel developed in 1980 provided an additional 5800 sq. meters of spawning habitat.

Both channels are chum enhancement projects.

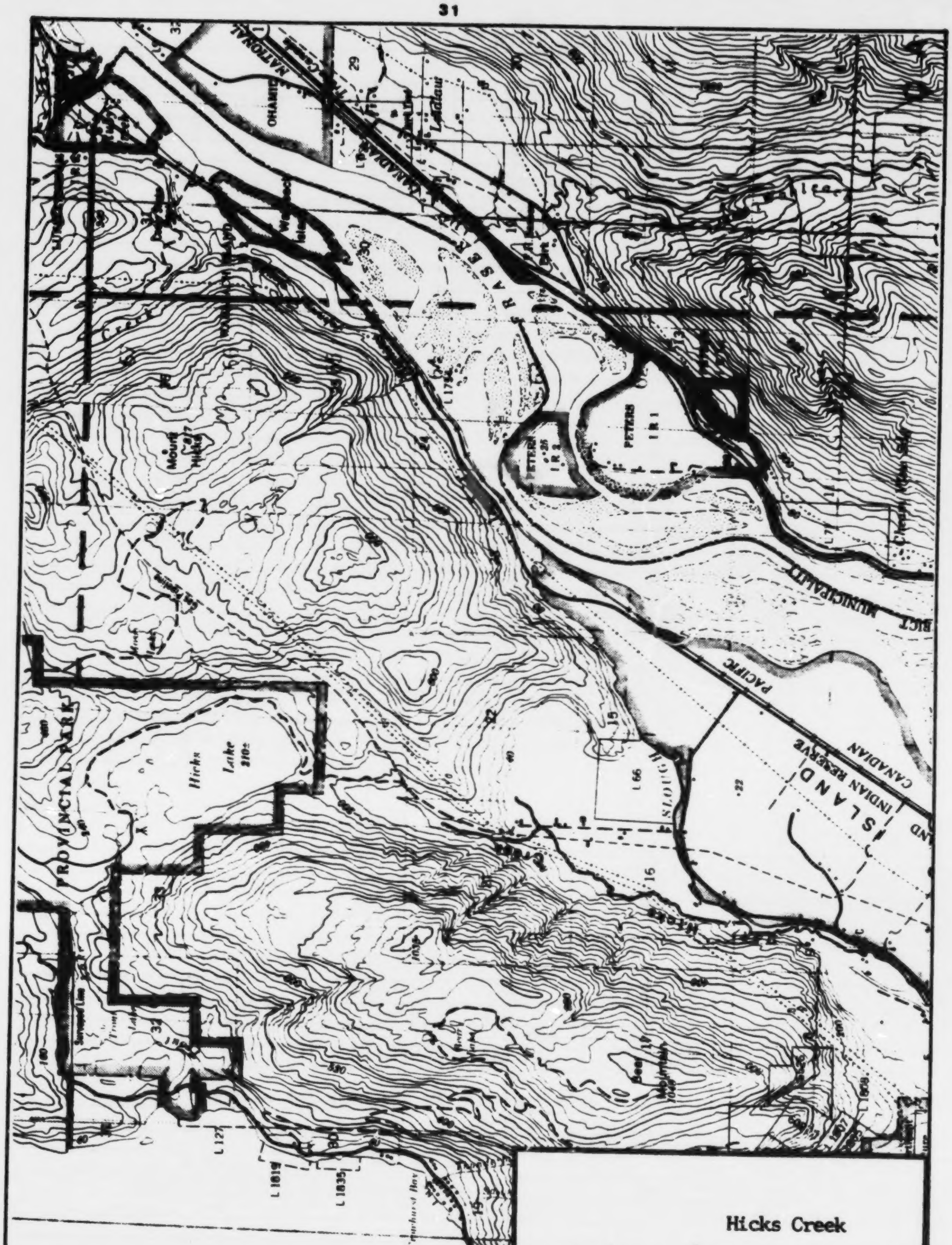
ESCAPEMENT RECORD FOR HARRISON RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947	35000	1500	UNK	35000	35000	
48	15000	1500		75000		
49	UNK	3500	UNK	35000	35000	
50	15000	750	UNK	75000		
51	3500	1500	UNK	35000	75000	UNK
52	15000	75000	3500	35000		
53	3500	15000		75000	75000	
54	15000	15000		35000		
55	7500	7500		35000	75000	
56	3500	3500		15000		
57	3500	3500		35000	250000	
58	14701	16500		35000		
59	28562	18000		60000	110000	
60	17029	3500		35000		
61	42778	5000		15000	186137	
62	8403	2000		20000		
63	22287	13500		40000	645476	
64	2202	6000	200	35000		
65	15034	8500		25000	69213	
66	32672	9000		110000		
67	15000	7500	75	35000	75000	
68	3500	7500	1500	75000		
69	15000	7500	1500	75000	7500	
70	7500	7500	1500	75000		
71	3500	15000	3500	35000	75000	UNK
72	750	15000	1500	75000		
73	3500	35000	1500	35000	100000+	
74	15000	35000	1500	75000		
75	3500	15000	1500	15000	75000	
76	7500	7500	750	75000		
77	3000	25000	2500	85000	130000	
78	15000	15000	1500	75000		
79	35000	15000	750	75000	100000+	
80	5100	10000	1500	60000	-	
81	3200	20000	400	128000	315000	
82	9200	22000	1000	96000	-	
83	4239	6000	UNK	155000	148000	
84	1267	15000	2500	212000	-	
85						

TIMING:

Arrive	SEP-OCT	SEP-OCT	OCT	SEP-OCT	SEP	
Start	SEP-NOV	SEP-OCT	OCT	SEP-OCT	SEP-OCT	
Peak	NOV	OCT-NOV	NOV-JAN	NOV-DEC	OCT	
End	NOV-DEC	NOV-DEC	JAN-MAR	JAN-FEB	NOV	

REMARKS 1977 Includes 3B in total. 1978 Includes 3B and adjacent sloughs.
1979 Includes counts from all adjoining sloughs.
1981 Chum figs includes 3B and Harrison Sloughs.
1982 Sockeye figs from I.P.S.C. Chum figs include 3B and Harrison Sloughs.
1983 Sockeye and pink total from I.P.S.F.C. Figs include all adjoining sloughs.
1984 Sockeye figs from I.P.S.F.C. Figs include all adjacent channels and Sloughs.


N
0
2
kilometres
PROVINCIAL PARK
Hicks Lake
Mount Hicks
FRASER
CANADIAN PACIFIC
ISLAND
INDIAN RESERVE
SLOUGH
Hicks Creek
Bear Mountain
Cartwright Bay
Camille Island
L 1819
L 1835
L 66

Hicks Creek

NAME OF STREAM (Hicks Creek) RAB NO. -

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 121 SW.

LOCATION OF MOUTH Flows S. into NE. end of Maria Slough, New Westminster Dist.

LENGTH 3.2 km WIDTH 5 m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C)

COMPOSITION: Bedrock Boulder 10% Coarse 10% Fine 28%

Silt & Sand 50% Unclassified 2% logs,pools

Barriers or Points of Difficult Ascent:

Impassable 3.6m high waterfall at 3.2km

Beaver dams removed as required

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chum	- from mouth to Kamp Rd.
coho	- from mouth to upper reaches

GENERAL REMARKS

A small spring area at 2.4km provides about 274m of the best spawning grounds.

1950/59 One of the best coho streams in the area. Stream is full of brush and logging debris which gives good cover to spawners. Intensified farming and irrigation demands will cause deterioration in next few years.

1960/69 Continues to be a good coho producer. Concern expressed over dangers posed by agriculture. Silting will increase with removal of bush cover.

1972 Slide in '71 started the alteration of channels in the upper reaches. Powerline right of way construction continued that trend. Pipeline people dug a channel to the spawning ground that, up to this, date has stood up well to some very high flows.

1973/4 Considerable construction work by Dillingham Corporation. A new natural gasline and an additional high voltage powerline being installed.

1976 Some channelization done at the top end by B.C.Hydro where stream comes down canyon.

1977/78 Stream suffers from lack of water. Study should be made on using Hicks Lake as a water source.

1979 Flood conditions, scouring and silting occurred in the entire stream — 50% egg loss.

continued.....

continuation

(Hicks Creek)

1981/83 Badly silted in some areas. 1984 Reports mid-section silted up to 3 feet in depth. Needs better water supply which could be brought from Hicks L. 40% loss of spawners due to the heavy rains of Jan. 1984

1984 This would be an excellent enhancement project. Good water flows, good water source and public involvement of Seabird Indian Band. Walked 7 times this year.

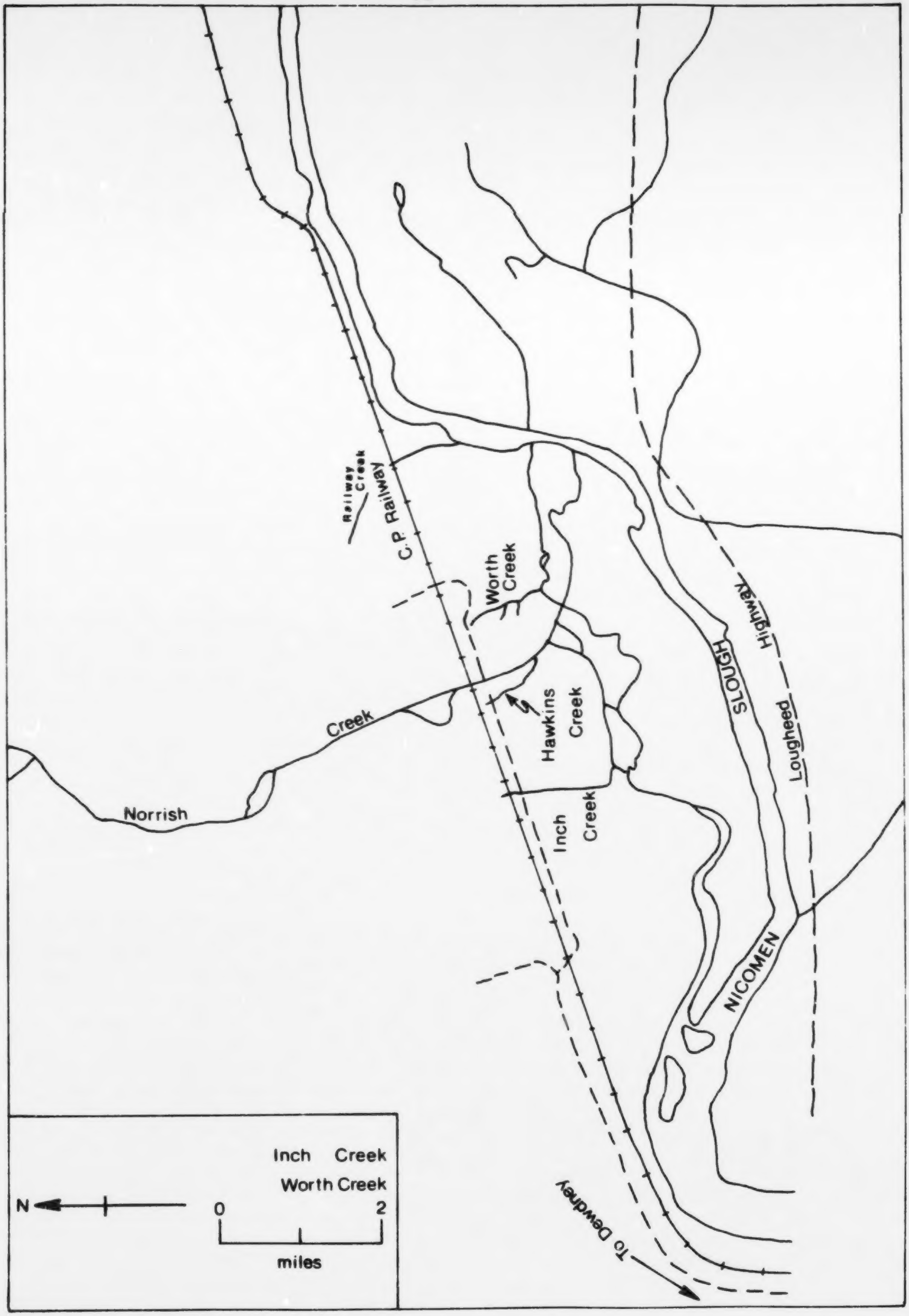
ESCAPEMENT RECORD FOR (Hicks Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48			400			
49			750			
50			750			
51			750	25		UNK
52			750	25		
53			3500	25		25
54			1500			
55			1500			
56			1500	25		
57			1500	25		
58			400	25		
59			1500	25		
60			500			
61			750	25		
62			2000	25		
63			700	25		
64			2200	25		
65			800	25		
66			2200	50		
67			1500	25		
68			750	25		
69			1500	25		
70			750	75		
71			1500	25		
72			75	25		
73			400	25		
74			750	25		
75			1500	25		
76			750			
77			600	250		
78			75	25		
79			750	25		
80			500	100		
81			350	150		
82			300	75		
83			200	200		
84			450	150		
85						

TIMING:

Arrive			L. OCT	L. OCT-NOV		
Start			NOV-DEC	OCT-NOV		
Peak			M. DEC-JAN	NOV		
End			JAN-FEB	DEC		

REMARKS


Railway Creek
C.P. Railway
Worth Creek
Hawkins Creek
Inch Creek
Norrish Creek
NICOMEN SLOUGH
Lougheed Highway
To Dewdney
Inch Creek
Worth Creek
N
0
2
miles

NAME OF STREAM (Inch Creek) RAB NO. 00-0552-020-005

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 122 SE

LOCATION OF MOUTH Flows into Norrish Creek at tributary of Nicomen Slough, New Westminster District.

LENGTH 1.2 km WIDTH 3.6 m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (^{o}C) 3.3 (March 10, 1965)

COMPOSITION: Bedrock Boulder Coarse 10% Fine 40%
Silt & Sand 50% Unclassified

Barriers or Points of Difficult Ascent:

Ground water source at hatchery — beaver dams at mouth are maintained.

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- throughout
chum	- throughout

GENERAL REMARKS

1956	Forest cover removed for the development of a goat farm.
1950/59	Stream runs through very flat bushland and frequently changes course. Short but very productive stream. Stream cover being removed by farmers.
1959	Removal of beaver dams and trapping paid off. Best chum run in years.
1965	Beaver dams are a continuous problem. C.P.R.proposed gravel pit at headwaters — may change flow patterns.
1967	The stream was damaged by a large deposit of silt caused by flushing action when a channel to supply extra flow was cut from Suicide Creek.
1968	The lower creek was bulldozed causing silting to 100% of stream. An attempt to clear silt resulted in the streambed being widned and the water flow being spread over an excessive area with no holding pools.
1970	Major stream improvement work was done by the Resource Development Branch. This involved; replacement of spawning gravel, construction of a small weir to control water depth and velocity and installation of an infiltration gallery to supply additional ground water.

continued.....

continuation

(Inch Creek)

1970 This stream was chosen for the first major chum salmon enhancement project in the lower Fraser Valley. The pilot project was started using two 500,000 egg capacity incubation boxes. The 1964-73 escapement average of 2100 was increased to a 1974-77 escapement average of 6700 chum. The average egg-to-fry survival rate is 76%.

A proposed facility upstream of the pilot project will use incubation boxes to incubate 1.8 million chum eggs and 1.5 million coho eggs.

1976 Fresh gravel hauled into top end of creek.
1977/79 Stream enhancement work in planning stages.
1982 Highest chum return on record.
1983 Late run chum didn't turn up. 100% loss of spawners due to heavy rains Jan.'84.
1984 Approx 100 hatchery coho jacks returned. Dead pitch of chum conducted by hatchery staff. Silt and sediment lies up to 3 feet deep in some places due to January flood. Counting fence and trap was removed Jan. '85.

Physical conditions: Slight to miderate silting, scouring during heavy rain. Seasonal fluctuations in water levels.

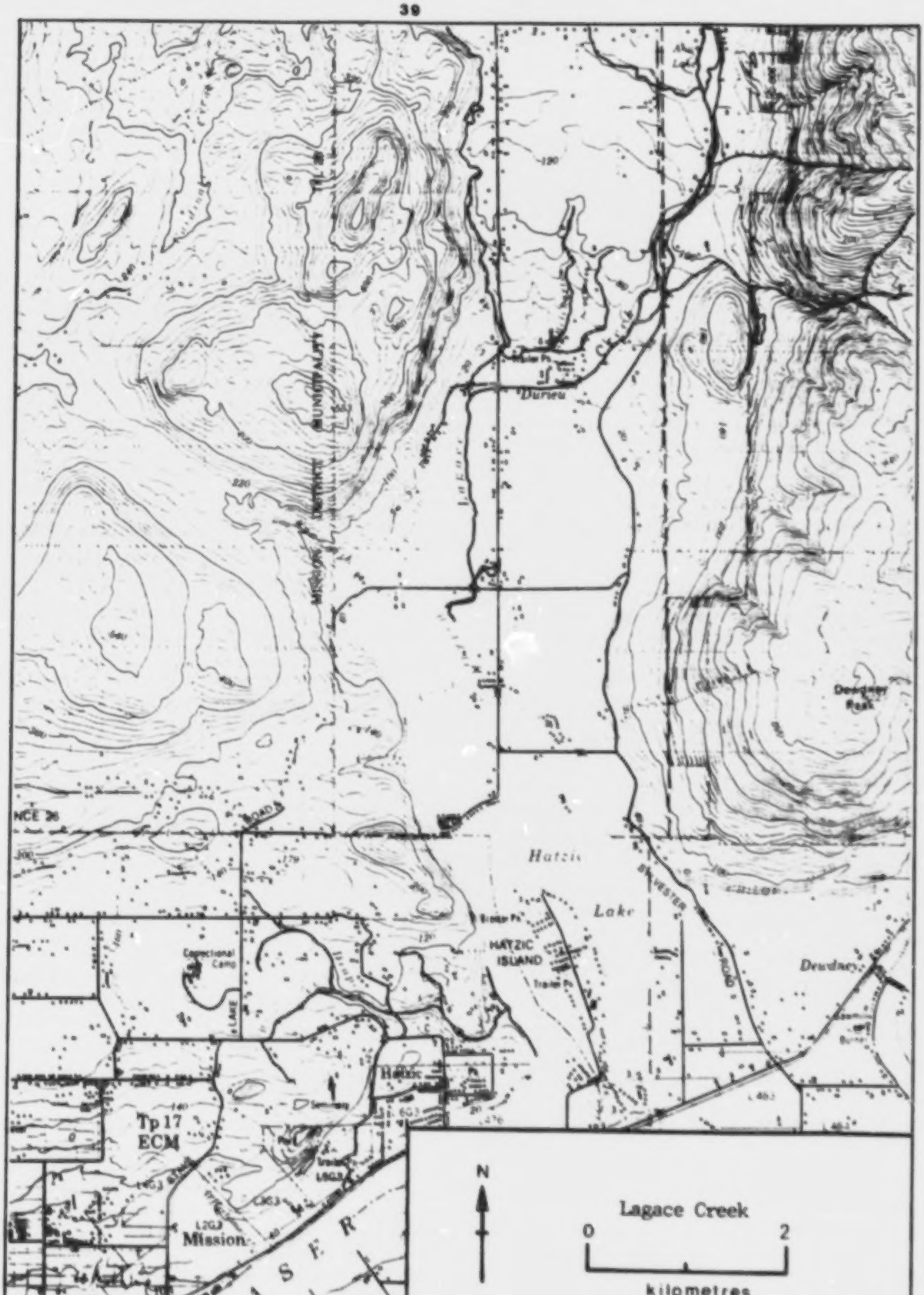
ESCAPEMENT RECORD FOR (Inch Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48			UNK	1500		
49			200	1500	75	
50			75	3500		
51			75	750	25	
52			25	750		
53			25	400	25	
54			200	1500		
55			N/O	200	25	
56			25	400		
57			25	3500	75	
58			200	750		
59			75	3000	N/O	
60			75	550		
61			75	200		
62			400	3000		
63			200	3000		
64			200	750		
65			430	1800		25
66			500	3000		
67			750	3500		25
68			200	3500		
69			200	1500		
70			25	3500		
71			200	750		
72			25	400		
73			25	1500		
74			200	7400		
75			75	7500		
76			200	7500		
77			250	6500		
78			N/O	3500		
79			75	7500		
80			30	50		
81			15	3500		
82			125	8250		
83			150	4500		
84			300	16600		
85						

TIMING:

Arrive			OCT-DEC	OCT		
Start			NOV	OCT-NOV		
Peak			DEC-M. JAN	DEC		
End			JAN-L. FEB	JAN-E. FEB		

REMARKS


Durieu
MISSION DISTRICT MUNICIPALITY
Hatzic
Lake
HATZIC ISLAND
Correctional Camp
SYLVESTER ROAD
Dewdney Peak
Dewdney
Hatzic
Tp 17
ECM
Mission
RASER
N
Lagace Creek
0
2
kilometres

NAME OF STREAM LAGACE CREEK RAB NO. 00-0500-060

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 122 SE

LOCATION OF MOUTH Flows S. and E. into Hatzic Slough, N. of Hatzic L., New Westminster Dist.

LENGTH 5 km WIDTH 6 m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C) 6.7 (Feb 18,1971)

COMPOSITION: Bedrock Boulder 30% Coarse 20% Fine 13%

Silt & Sand Unclassified 7% logs and pools

Barriers or Points of Difficult Ascent:

6 km to Allen Lake — log jams and beaver dams — removed as necessary.
Fish must pass through Hatzic Pumping Station on their way to and from this stream.

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- throughout several small tributaries and to Lake
chum	- to 1/4 mile past Lundgen Road mostly in lower reaches

GENERAL REMARKS

1956/57	Flood control measures by Provincial Public Works has resulted in unstable stream bed.Stream cover growing back but dredging and gravel removal operations continue to destroy habitat.
1960/70	Suggest this stream be studied by engineers to try and find a solution to flood control problems.
1973/75	75 - 90% erosion and silting — extensive scouring over most of stream.
1979	100% loss due to mid December flood — heavy bank erosion — stream course changes.
1982	Lower end of stream can be considered a loss every year due to flooding. Slides in upper reaches of Pattison Creek during spring thaw.
1983	Gravel removal below Pattison Rd. caused moderate silting. Vehicle bridge installed at Pattison Rd. Chum return matched brood year. 7 stream inspections done this season. 100% loss of spawners due to heavy rains in January.
1984	Excellent run of coho. Stream was walked 9 times this year. Lower stream area was dredged in 1984. Extreme low water and some freezing of exposed salmon redds has no doubt killed some eggs. Inch Creek Hatchery has expressed some interest in this stream. High number of jacks.

Predation: birds, man, sizable cutthroat population.

ESCAPEMENT RECORD FOR LAGACE CREEK

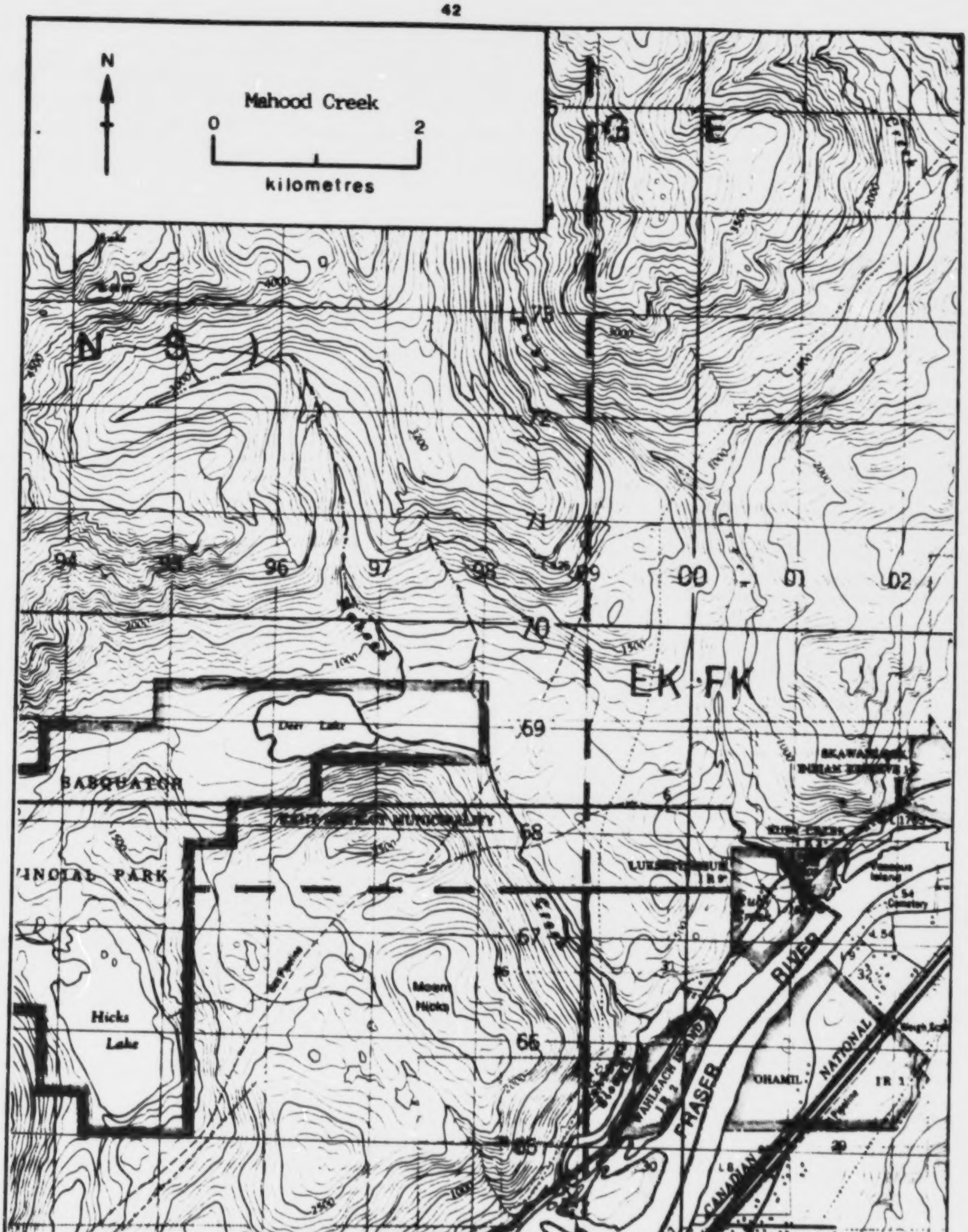
YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			UNK	400	25	
48			N/O	25		
49			UNK	25	N/O	
50*						
51*						
52			UNK	400		
53			25	75		
54			25	25		
55			N/O	N/O		
56			N/O	N/O		
57			25	75		
58			25	25		
59			UNK	25		
60			N/O	25		
61			N/O	N/O		
62			NONE OBSERVED			
63						
64						
65				25		
66						
67						
68						
69						
70			25			
71			25			
72			N/O			
73			25			
74*						
75			400	200		
76			25	25		
77			50	400		
78			25	75		
79			25	75		
80			50	300		
81			20	30		
82			50	50		
83			N/O	75		
84			275	150		
85						

TIMING:

Arrive			NOV-DEC	OCT-NOV		
Start			NOV-DEC	OCT-NOV		
Peak			DEC	NOV		
End			JAN	NOV-DEC		

REMARKS

* No records for these years


N
Mahood Creek
0
2
kilometres
G E
N S
EK FK
94
95
96
97
98
99
00
01
02
73
72
71
70
69
68
67
66
65
Deer Lake
SASQUATCH
PROVINCIAL PARK
Hicks Lake
Mount Hicks
SKAWAHLOOK INDIAN RESERVE 1
FRASER
RIVER
CANADIAN
NATIONAL
OHAMIL
IR 1
WAHLEACH ISLAND IR 2
Laidlaw
IR 2
1000
1500
2000
2500
3000
4000

NAME OF STREAM MAHOOD CREEK RAB NO. -

LOCAL NAME (Gallagher Creek, Johnson Slough)

DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 121 SW

LOCATION OF MOUTH

LENGTH 3.2 km WIDTH 7.6 m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature ($^{\circ}$C) 5 (March 2,1971)

COMPOSITION: Bedrock Boulder 14% Coarse 10% Fine 7%

Silt & Sand 66% Unclassified 3% logs, pools

Barriers or Points of Difficult Ascent:

Impassable falls at 3.2km
No potential for spawning above the falls as the streambed is composed mainly of boulders.

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- top end of creek and slough as far as falls
chum	- " " " "

GENERAL REMARKS

1958	80% erosion and silting -- stream bed damaged by logging.
1960/69	Only minor spawning observed. Returning forest cover might stabilize this stream.
1969	Heavy pink return — some egg digging and overcrowding of other species.
1979	50% loss of spawn due to mid. December flood.
1983	Pink figure from I.P.S.F.C. 90% loss of spawn due to heavy rains Jan. 84.
1984	Total include spawners in Johnson Slough. Stream was walked 9 times this year.

Seasonal fluctuations in water levels — silting in lower stream

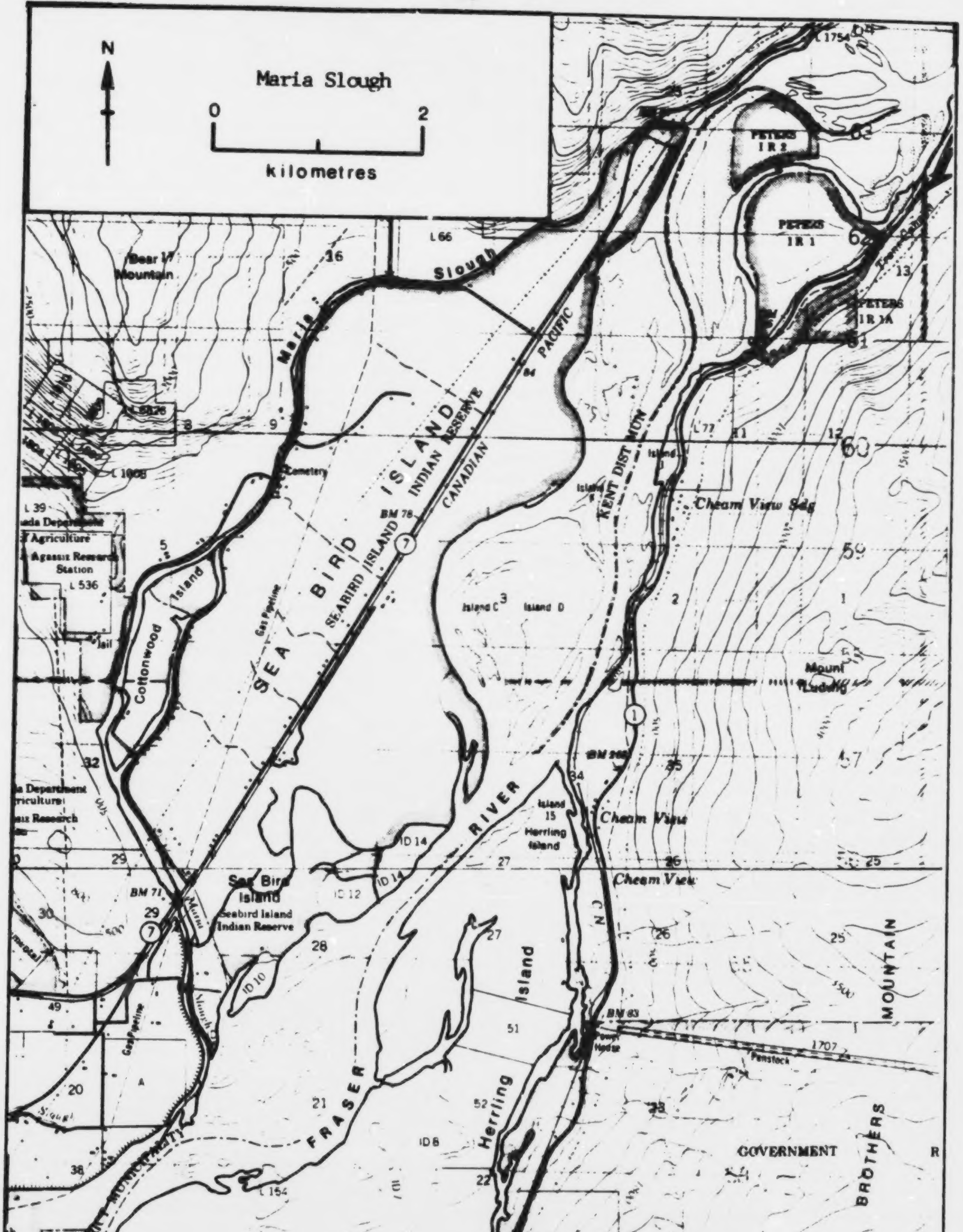
ESCAPEMENT RECORD FOR MAHOOD CREEK (Gallagher Cr. Johnson Slough)

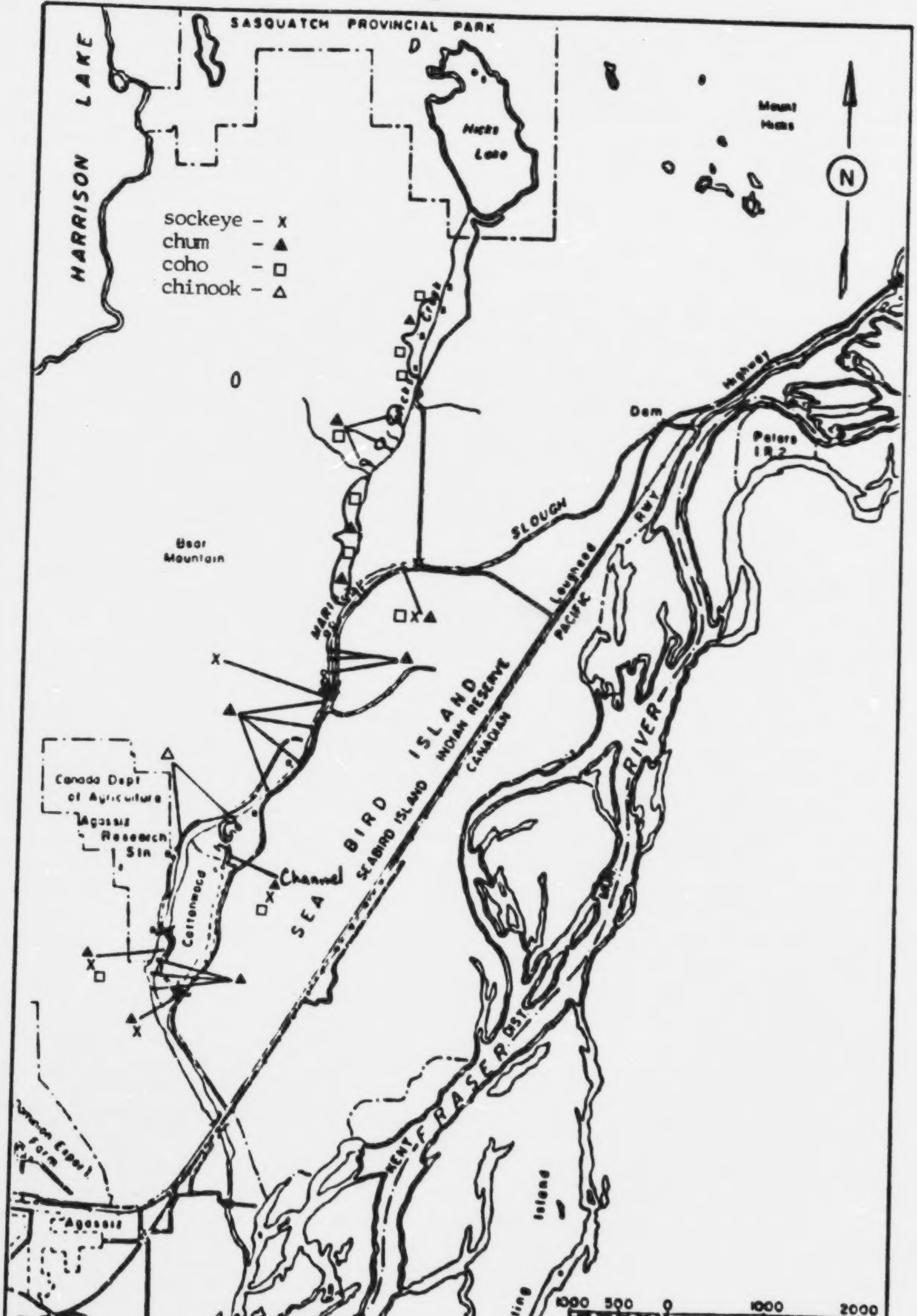
YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57			NO RECORDS PRIOR TO 1958			
58	1000					
59			75	75		
60			75	400		
61	25					
62	N/O		75	UNK		
63	N/O		N/O	N/O		
64			N/O	N/O		
65	N/O		NO RECORD			
66			N/O	N/O		
67			6	4		
68			25	75	400	
69			75	75		
70			75	75	1500	
71			25	N/O		
72			200	25	3500	
73			25	200		
74			200	25	3500	
75			200	25		
76			25	25	25	
77			25	75		
78	25		50	200	50	
79			25	400		
80			25	75	25	
81			25	50	-	
82	12		5	60	3000	
83	25		80	350		
84	20		UNK	175	939	
85			40	1000	-	

TIMING:

Arrive	NOV		SEP-NOV	OCT	SEP-OCT	
Start	E. NOV		OCT- NOV	OCT	SEP-OCT	
Peak	L. NOV		E-L. OCT	NOV	OCT	
End	M. DEC		DEC-L. JAN	DEC	NOV	

REMARKS


N
Maria Slough
0
2
kilometres
Maria Slough
SEA BIRD ISLAND
SEABIRD ISLAND INDIAN RESERVE
CANADIAN PACIFIC
Cottonwood Island
Gas Pipeline
Cemetery
Bear Mountain
Agassiz Research Station
PETERS I R 2
PETERS I R 1
PETERS I R 1A
KENT DIST MUN
Cheam View Sdg
Island C
Island D
Mount Ludwig
FRASER RIVER
Island 15 Herrling Island
Cheam View
Sea Bird Island
Seabird Island Indian Reserve
Herrling Island
Power House
Penstock
KENT DISTRICT MUNICIPALITY
GOVERNMENT
FOUR BROTHERS MOUNTAIN
Tp 3 R 28 W6M
POPKUM INDIAN
IR 567
BM 71
BM 78
BM 83
BM 105
L 66
L 154
ID 14
ID 12
ID 10
ID 8
ID 2


SASQUATCH PROVINCIAL PARK
HARRISON LAKE
D
Hicks Lake
Mount Hicks
N
sockeye - x
chum - ▲
coho - □
chinook - △
Hicks Creek
Bear Mountain
SLOUGH
MARIA SL.
Dam
Highway
Peters I.R. 2
Lougheed
PACIFIC
RWY
CANADIAN
SEA BIRD ISLAND
SEABIRD ISLAND INDIAN RESERVE
Canada Dept of Agriculture
Agassiz Research Stn
Channel
Cottonwood
FRASER RIVER
KENT DST.
Agassiz
Island
1000 500 0 1000 2000
Metres

Spawning distribution of salmon in
Maria Slough and Hicks Creek Nov 84-Mar '85.

NAME OF STREAM MARIA SLOUGH RAB NO. 00-0700

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 121 SW

LOCATION OF MOUTH Fraser R., W. of Seabird Island, Yale Dist.

LENGTH 11 km WIDTH 73 m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C) 6.7 (Feb. 5, '71)

COMPOSITION: Bedrock Boulder Coarse 4% Fine 25%

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

Heavy beaver activity -- dams monitored and removed as required.
C.P.R.dam at top end of slough cuts off natural flow.

SPAWNING DISTRIBUTION

Species	Section of Stream Used
sockeye	- scattered from first culvert to Camp Rd. culvert
chinook	- " " "
coho	- " " "
pink	- " " "
chum	

GENERAL REMARKS

1956	Chinook endangered by heavy Indian fishery. Extremely vulnerable as they spawn in Sept. when water levels are low. Suggest hiring a guardian ('58)
1960	Many miles of excellent gravel with no danger from floods.
1964	Stream clearance on the upper part of this slough.
1968/70	This stream is an excellent rearing area and has considerable gravel areas, however the lack of sufficient flow permits the settling of silt and mud and the consequent growth of weeds. Additional water from the main Fraser would alleviate the problem.
1971/79	Very heavy build up of plant and mud deposits are continuing to restrict the available spawning area. Requires additional water flow.
1982	All runs down from brood. Heavy silting and increasing vegetation covering gravel up to three feet. Majority of chinook snagged by local residents.
1984	Spawning channel for chum constructed in 1984. Helicopter is best method of enumeration.

Heavy predation by man particularly by man.

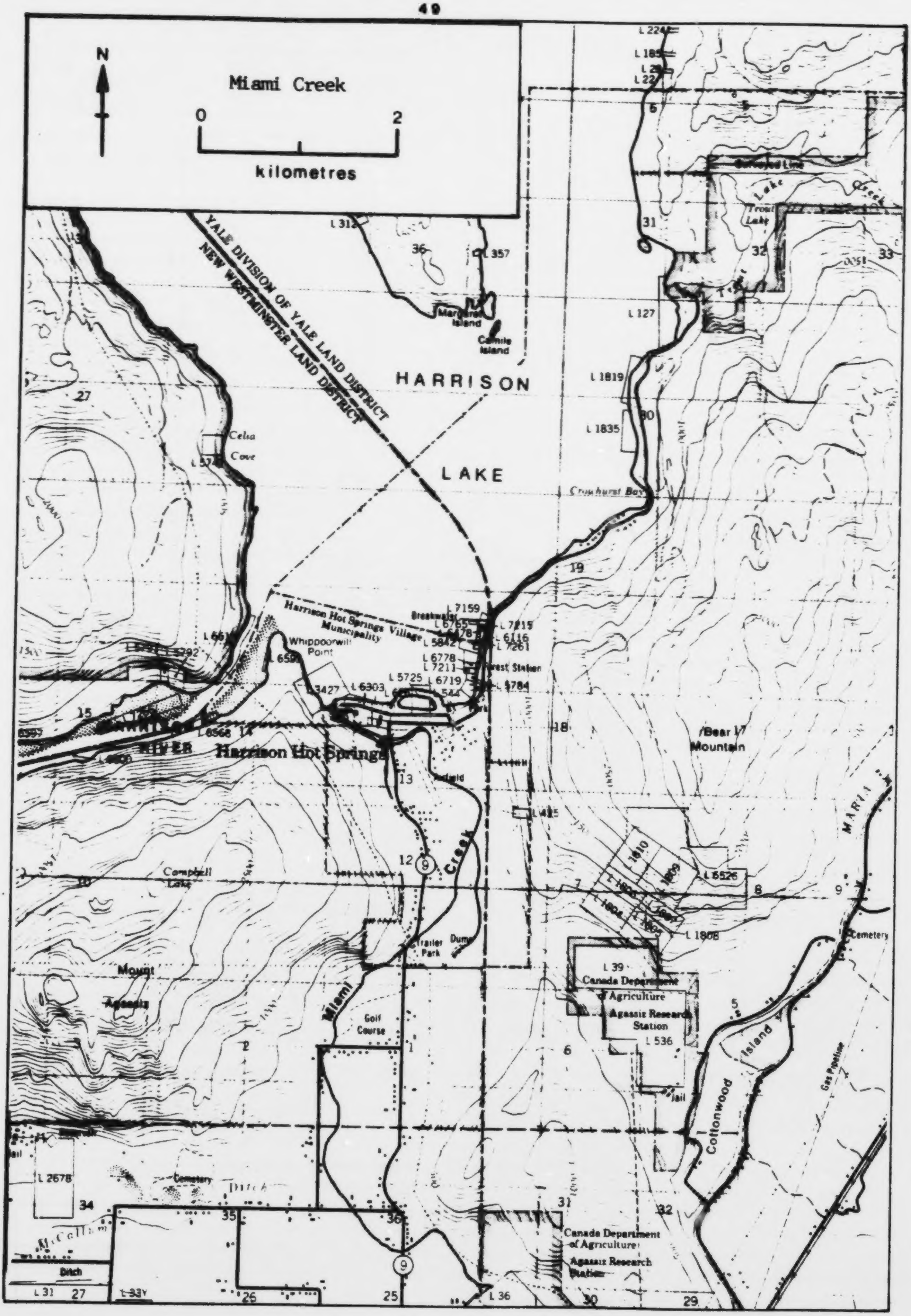
ESCAPEMENT RECORD FOR MARIA SLOUGH

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947	N/O	200	25	25	N/O	25
48		200	25	400		
49		400	200	400		
50		200	25	750		
51		75	75	400		
52		200	200	200		
53		200	750	400		
54		75	400	25		
55		25	200	25		
56		75	400	75		
57		200	400	400	200	
58	400	25	200	400		
59		25	400	200		
60		25	200	200		
61	25	25	200	200		
62	N/O	150	400	25		
63	25	260	200	1500		
64	25	UNK	200	175		
65		150	200	200		
66		119	200	251		
67	200	200	75	400		
68	200	75	200	75		
69	200	400	400	1500	400	
70	75	200	200	1500		
71	75	75	200	400	400	
72	200	200	200	750		
73	75	200	200	750		
74	75	75	200	200		
75	75	75	200	400		
76	25	25	75	200		
77	200	200	200	400		
78	75	200	200	200		
79	75	75	75	200	25	
80	50	100	250	300	-	
81	N/O	20	UNK	400	UNK	
82	25	50	25	200	-	
83	N/O	50	25	300	50	
* 84	125	30	400	1435		
85						

TIMING:

Arrive	SEP-NOV	SEP	SEP-NOV	OCT	SEP	
Start	SEP-NOV	SEP-OCT	OCT-NOV	E. OCT	SEP	
Peak	OCT-E. DEC	SEP-OCT	NOV-DEC	NOV-DEC	OCT	
End	NOV-L. DEC	NOV-M. DEC	JAN-L. FEB	DEC-FEB	OCT	

REMARKS 1984 Spot checked at various sites. Helicopter is best method for enumeration. Stream was walked 7 times this year.


N
Miami Creek
0
2
kilometres
YALE DIVISION OF YALE LAND DISTRICT
NEW WESTMINSTER LAND DISTRICT
HARRISON
LAKE
Margaret Island
Camille Island
Celia Cove
Crowhurst Bay
Trout Lake
Harrison Hot Springs Village Municipality
Whippoorwill Point
Breakwater
Forest Station
HARRISON RIVER
Harrison Hot Springs
Airfield
Miami Creek
Campbell Lake
Bear Mountain
Trailer Park
Dump
Mount Agassiz
Golf Course
Canada Department of Agriculture
Agassiz Research Station
Jail
Cemetery
Cottonwood Island
Gas Pipeline
MARIA
Ditch
McCallum
9
L 7159
L 6765
L 6778
L 5842
L 7215
L 6116
L 7261
L 7211
L 5725
L 6719
L 5784
L 6303
L 3427
L 6566
L 1819
L 1835
L 127
L 357
L 425
L 6526
L 1808
L 39
L 536
L 2678
L 36
L 31
27
36
31
32
33
30
19
18
17
15
14
13
12
10
7
8
9
6
5
2
1
34
35
25
26
29

NAME OF STREAM MIAMI CREEK RAB NO. 01-0600

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 121 SW

LOCATION OF MOUTH Flows N. into S. end of Harrison L., New Westminster Dist.

LENGTH 8 km WIDTH 9 m DRAINAGE km^2

DISCHARGE (m^3/s) MAX 11.9 Jan 15, 1961 MIN Unknown

Temperature (^{o}C) 2.2 (Feb. 11,'71)

COMPOSITION: Bedrock Boulder Coarse Fine 6%

Silt & Sand 91% Unclassified 3% logs, brush

Barriers or Points of Difficult Ascent:

SPAWNING DISTRIBUTION

Species	Section of Stream Used

GENERAL REMARKS

This area has become mostly swamp — no salmon reported since 1969

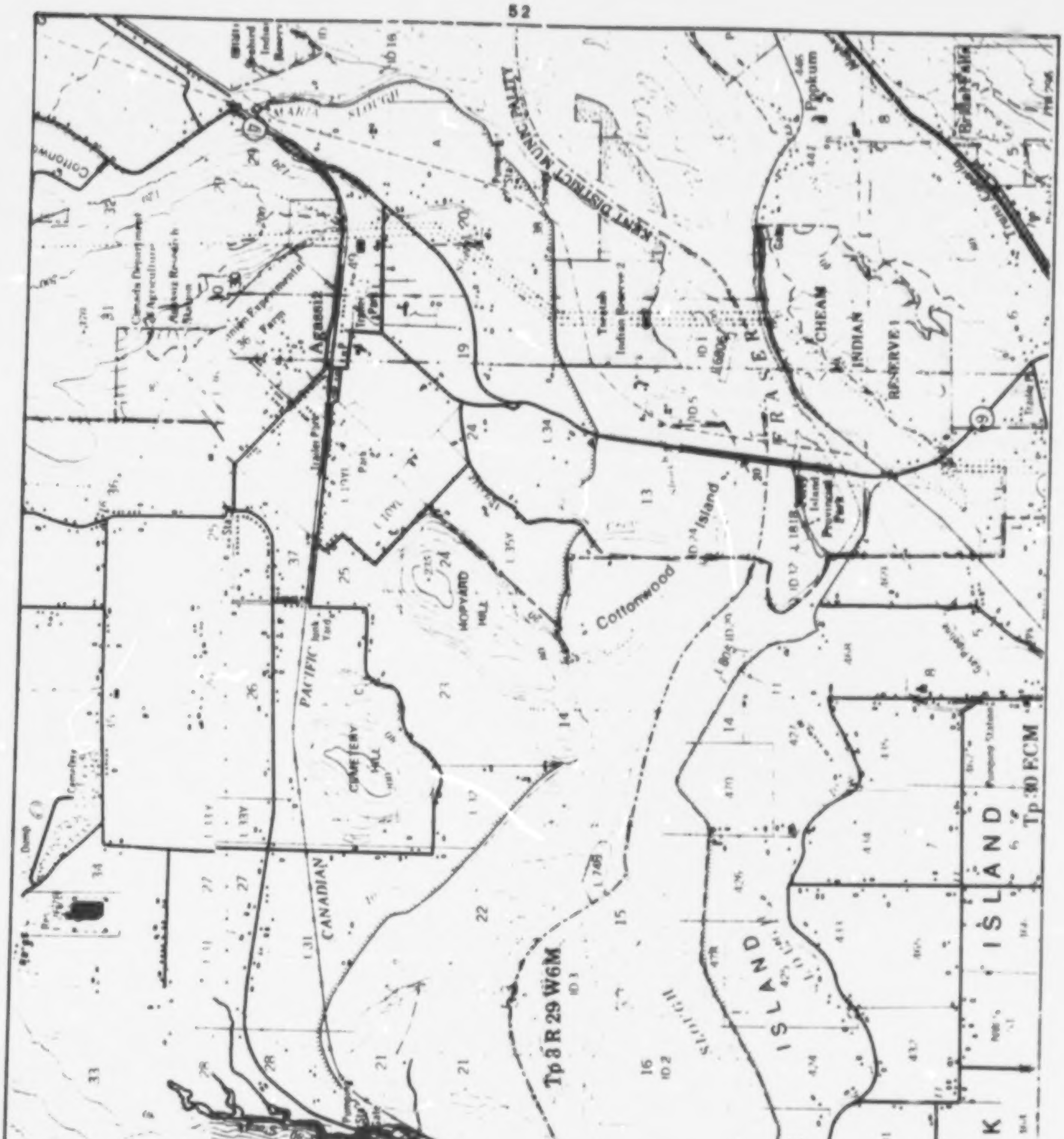
ESCAPEMENT RECORD FOR MIAMI CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51		NO RECORDS PRIOR TO 1953				
52						
53			200			
54			NO REC			
55			NO REC			
56			75			
57			75			
58			25			
59			NO REC			
60			N/0			
61			25			
62			200			
63			75			
64			75			
65			25			
66			25			
67			N/0			
68			N/0			
69			25			
70			N/0			
71			N/0			
72			N/0			
73			NO REC			
74			NO REC			
75			N/0			
76			N/0			
77			N/0			
78			N/0			
79			N/0			
80			N/0			
81			N/0			
82			N/0			
83			N/0			
84			UNK			
85						

TIMING:

Arrive			-			
Start			-			
Peak			-			
End			-			

REMARKS


Mountain Slough
N
0
2
kilometres
Agassiz
KENT DISTRICT MUNICIPALITY
MARIA SLOUGH
Popkum
CHEAM INDIAN RESERVE 1
FRASER
Cottonwood Island
HOPYARD HILL
CEMETERY HILL
CANADIAN PACIFIC
Tp 3 R 29 W6M
Tp 30 ECM
ISLAND
GREYELL SLOUGH
Mount Woodside

NAME OF STREAM MOUNTAIN SLOUGH RAB NO. 00-0665

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 121 SW.

LOCATION OF MOUTH North side of Fraser R., E. of mouth of Harrison R., New West. Dist.

LENGTH km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

1979 Three beaver dams -- should be removed.

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho chum	- top end in small stream - in lower 3/4 mile

GENERAL REMARKS

1978 Pump station and flood gates at dyke have severe detrimental effects on migrating fry and smolts. The top end where coho currently spawn needs enhancement work -- channelization to supplement water supply, stream clean-up and possible gravel cleaning or deposition.

1979 No spawning gravel found.

1982 C.P.S.Mountain Institute has expressed interest in enhanceing this stream

1983 Heavy rain in Jan. 1984.

1984 Active sport fishery at mouth.

Usual seasonal fluctuations in water levels — 1982/84 reported moderate silting.

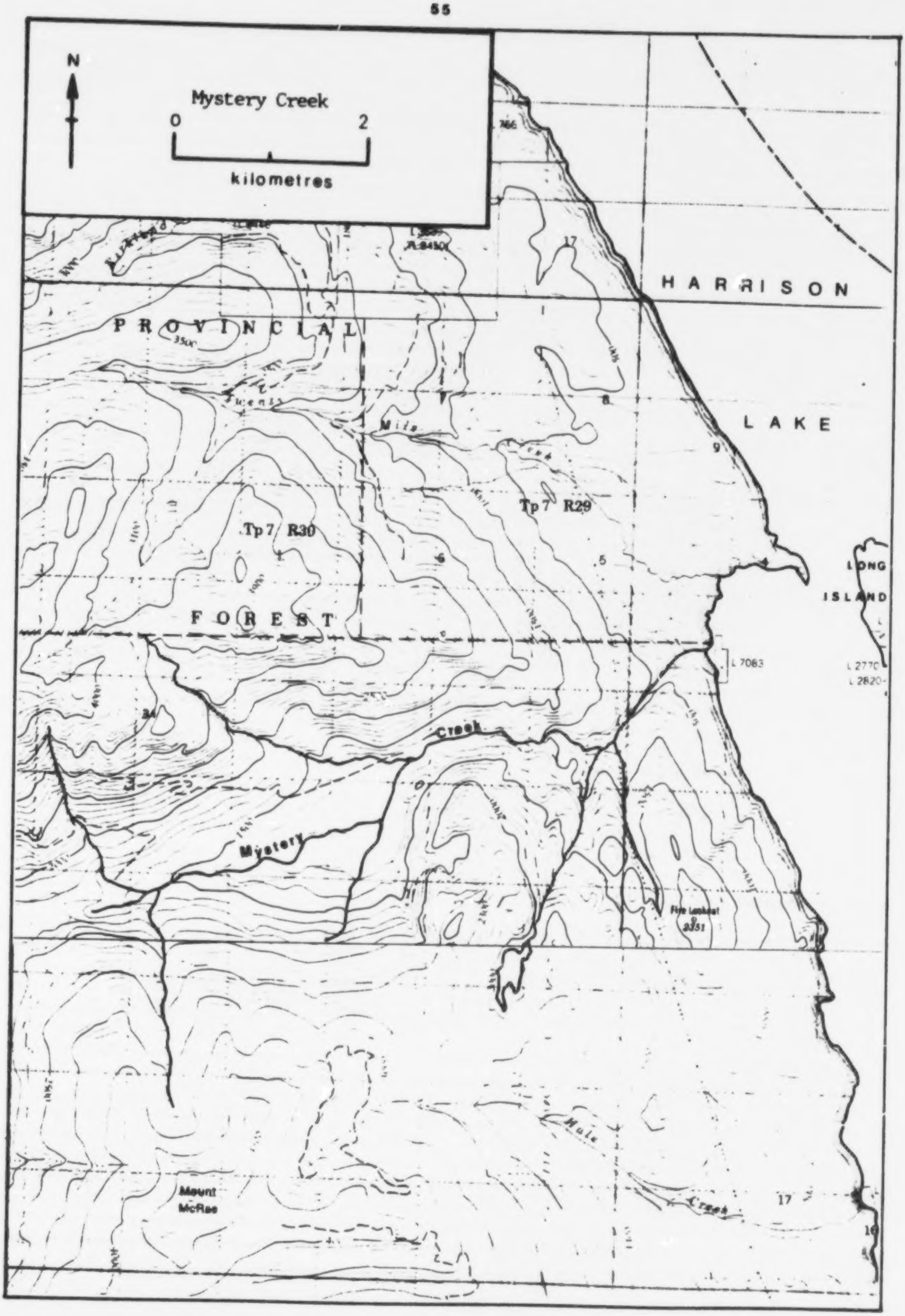
ESCAPEMENT RECORD FOR MOUNTAIN SLOUGH

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
* 79			200	25		
80			N/O	N/O		
81			30	25		
82			UNK	UNK		
83			N/O	N/O		
84			N/O	N/O		
85			UNK	UNK		

TIMING:

Arrive			DEC	OCT		
Start			DEC	OCT		
Peak			JAN	NOV		
End			FEB	DEC		

REMARKS


N
Mystery Creek
0
2
kilometres
HARRISON
LAKE
PROVINCIAL
FOREST
Tp 7 R30
Tp 7 R29
Twenty
Mile
Creek
17
8
9
6
5
4
34
LONG
ISLAND
L 7083
L 2770
L 2820
Creek
Mystery
Fire Lookout
3351
Mount
McRae
Mile
Creek
17
16

NAME OF STREAM MYSTERY CREEK RAB NO. 01-1500
LOCAL NAME
DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 121 NW.
LOCATION OF MOUTH Flows NE. into Harrison L., W. of Long I., New Westminster Dist.

LENGTH .8 km WIDTH 8 m DRAINAGE km^2
DISCHARGE (m^3/s) MAX MIN
Temperature (°C) 3.9 (Feb.12,1971)
COMPOSITION: Bedrock Boulder 75% Coarse 15% Fine 5%
Silt & Sand Unclassified 5% pools

Barriers or Points of Difficult Ascent:

Impassable rock falls .80 km from mouth
Stream above falls has high boulder content and many small falls.

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho chum	- beach spawning in Harrison L. and in lower stream to road - " " " " bridge.

GENERAL REMARKS

1956 Has a history of runs of all species. A more reliable stream than neighbouring Twenty-Mile.
1961 This stream has had light runs of chum, springs sockeye and coho in recent years. Loggers are now moving into the top of the watershed.
1964/66 Transportation problems prevented ennumeration.
1983 3 stream inspections done in the month of December. Heavy rain on Jan 3 - 5, 1984.
1984 Heavy snows made access a problem.

Physical conditions: Prone to flash flooding 82/84 — 1982 reported moderate erosion over spawning area. Heavy scouring of banks near rock fall (1982)

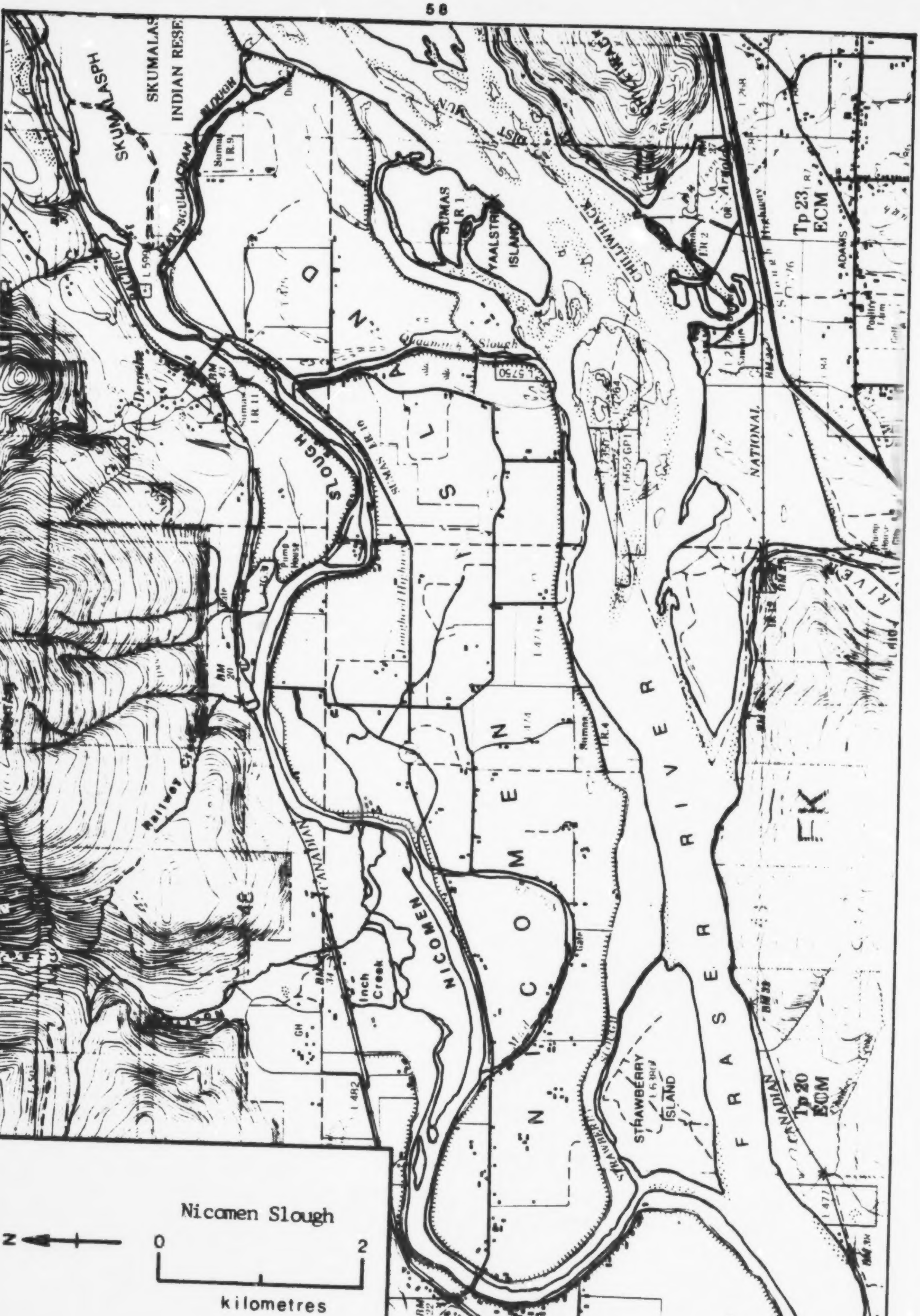
ESCAPEMENT RECORD FOR MYSTERY CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48				200		
49						
50						
51			UNK	75		
52	25	25	25	75		
53						
54						
55						
56						
57						
58						
59						
60						
61			25	25		
62						
63						
64						
65				25		
66				25		
67						
68				200		
69			25	25		
70			25	25		
71			25	25		
72			N/0	N/0		
73			75	25		
74			25	75		
75			25	25		
76			25	25		
77			25	25		
78			25	75		
79			N/0	N/0		
80			UNK	UNK		
81			3	22		
82	30		N/0	10		
83	UNK		UNK	UNK		
84	UNK		UNK	UNK		
85						

TIMING:

Arrive	OCT	-	OCT-NOV	OCT		
Start	OCT	-	OCT-NOV	OCT		
Peak	OCT	-	NOV-DEC	NOV		
End	NOV	-	JAN	NOV		

REMARKS


Nicamen Slough
N
0
2
kilometres
NICOMEN ISLAND
NICOMEN SLOUGH
FRASER RIVER
STRAWBERRY ISLAND
SUMAS I.R. 1
YAALSTRICK ISLAND
CHILLIWHACK
SKUMALASPH
SKUMALASPH INDIAN RESE
LATSCULLACHAN SLOUGH
Quaamitch Slough
SUMAS I.R. 10
Sumas I.R. 11
Sumas I.R. 4
Inch Creek
Railway Cr.
Deroche
Pump House
Lougheed Highway
CANADIAN
PACIFIC
NATIONAL
Tp 23 ECM
Tp 20 ECM
ADAMS

NAME OF STREAM NICOMEN SLOUGH RAB NO. 00-0552

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 122 SE.

LOCATION OF MOUTH N. side of Nicomen Island, Fraser River, E. of Hatzic Lake, New Westminster Dist.

LENGTH 19 km WIDTH 25 m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C) 5 (Feb. 24, '71)

COMPOSITION: Bedrock Boulder Coarse Fine 1%

Silt & Sand 99% Unclassified

Barriers or Points of Difficult Ascent:

Impassable at Bell's Dam — earth filled roadway at 19km. Numerous beaver dams removed as required.

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho chum	- mainly at the mouths of small tributaries and - on gravel patches in the slough proper.
pink	- none reported since 1953

GENERAL REMARKS

1951 Silt deposited by the 1948 flood reduced spawning grounds by 60%. A gate at Bell's dam would enable water from the Fraser River to flush out the slough.

1961/62 This excellent stream is desperately in need of attention. Beaver dam clearance needed. (65)

1966 Velocity in the slough could be increased by a culvert through Bell's Dam and would prevent the accumulation of silt and algae.

1970/74 Reports show concern that this slough is deteriorating through neglect. Good gravel under silt and weeds — excellent potential.

1978 Totals include Barnes, Pye, Deroche(Crazy) and Brosseau Creeks.

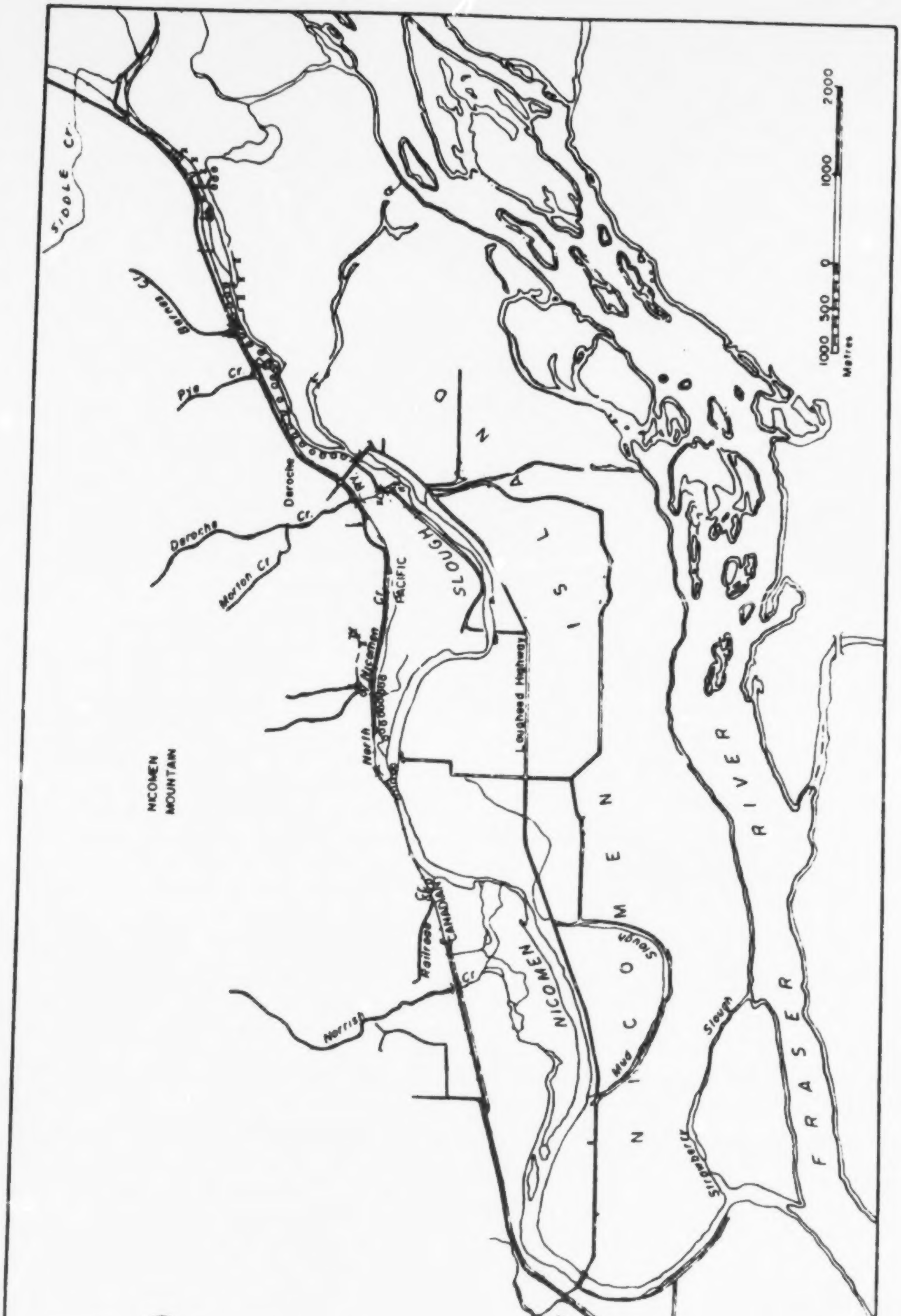
1979 Increased flow diverted from Fraser River would help upgrade stream.

1982 Heavy loss in Barnes and Crazy due to floods in January. Heavy silting in main channel.

1983 Heavy sports fishing pressure near mouth. 50% Loss of spawners due to heavy rains in Jan. '84.

1984 Heavy sports fishing pressure this year. Stream flown twice this year.

All years report heavy silting 90%. This slough is strongly affected by tides. Water levels mainly low except during freshets.


NICOMEN MOUNTAIN
Sidole Cr.
Bateau Cr.
Pye Cr.
Deroche Cr.
Deroche
Morton Cr.
North Nicomen Cr.
Railroad Cr.
Norrish Cr.
CANADIAN PACIFIC
NICOMEN SLOUGH
NICOMEN ISLAND
Lougheed Highway
Mud Slough
Strawberry Slough
FRASER RIVER
Dewdney
N
1000 500 0 1000 2000
Metres

NICOMEN SLOUGH AND TRIBUTARIES

NICOMEN SLOUGH AND TRIBUTARIES

LOCATION

Flows west for approximately 22 km entering Fraser River east of Mission.

STREAM INFORMATION

Nicomen Slough is a former side channel of the Fraser River which flows in a broad, diked channel through agricultural land. Excellent gravel deposits exist through much of the slough, however backflooding during peak Fraser River discharges coupled with reduced flows have resulted in the deposition of a thick layer of silt over most of the slough bottom. As a result, clear gravel exists only at channel constrictions and in areas with upwelling water.

Several streams tributary to Nicomen Slough are important salmon producers:

NORRISH CREEK (described elsewhere)

RAILROAD CREEK is a small groundwater-fed creek which meanders through exposed farmland, entering Nicomen Slough east of the East Norrish confluence. Chum spawn throughout the creek. The spawning area in this tributary was recently rehabilitated by SEP.

NORTH NICOMEN CREEK (local name) flows west for approximately 1.6 km entering the slough 4.5 km west of Deroche. Gravel deposits exist in a series of upwelling pools between 0.6 km and a marsh located 0.75 km upstream. Chum spawning is observed in these gravel areas.

DEROCHE (CRAZY) CREEK flows in a southerly direction entering the slough 200 m west of Deroche. Gravel deposits exist in the lower 300 m above which the gradient precludes further access.

PYE CREEK flows in a southerly direction entering the slough 1.3 km east of Deroche. Spawning occurs up to the impassable culvert and boulder trap 300 m upstream.

Chum salmon spawn in several primarily groundwater-fed areas throughout the upper slough: in a short section at the confluence of North Nicomen Creek; between kms 0.6 and 0.74 in North Nicomen Creek; at groundwater extrusions and channel constrictions from the Deroche highway bridge upstream for approximately 4 km.

Available data indicates that prior to the damming of Nicomen Slough inflows in 1937, this system was a significantly greater chum producer than at present.

ESCAPEMENT RECORD FOR NICOMEN SLOUGH

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			25	3500		
48				3500		
49			200	3500	25	
50			75	3500		
51			750	7500	25	
52			200	750		
53			400	1500	25	
54			750	1500		
55			400	400	N/O	
56			75	25		
57			1500	3500		
58			400	750		
59			400	1500		
60			200	750		
61			400	750		
62			750	750		
63			400	2000		
64			750	750		
65			750	750		
66			750	3500		
67			200	750		
68			200	400		
69			200	750		
70			200	1500		
71			400	1500		
72			75	400		
73			400	400		
74			400	750		
75			400	3500		
76			200	7500		
77			1500	6500		
78			750	3500		
79			750	3500		
80			800	4000		
81			400	12000		
82			500	3000		
* 83			UNK	3650		
* 84						
85						

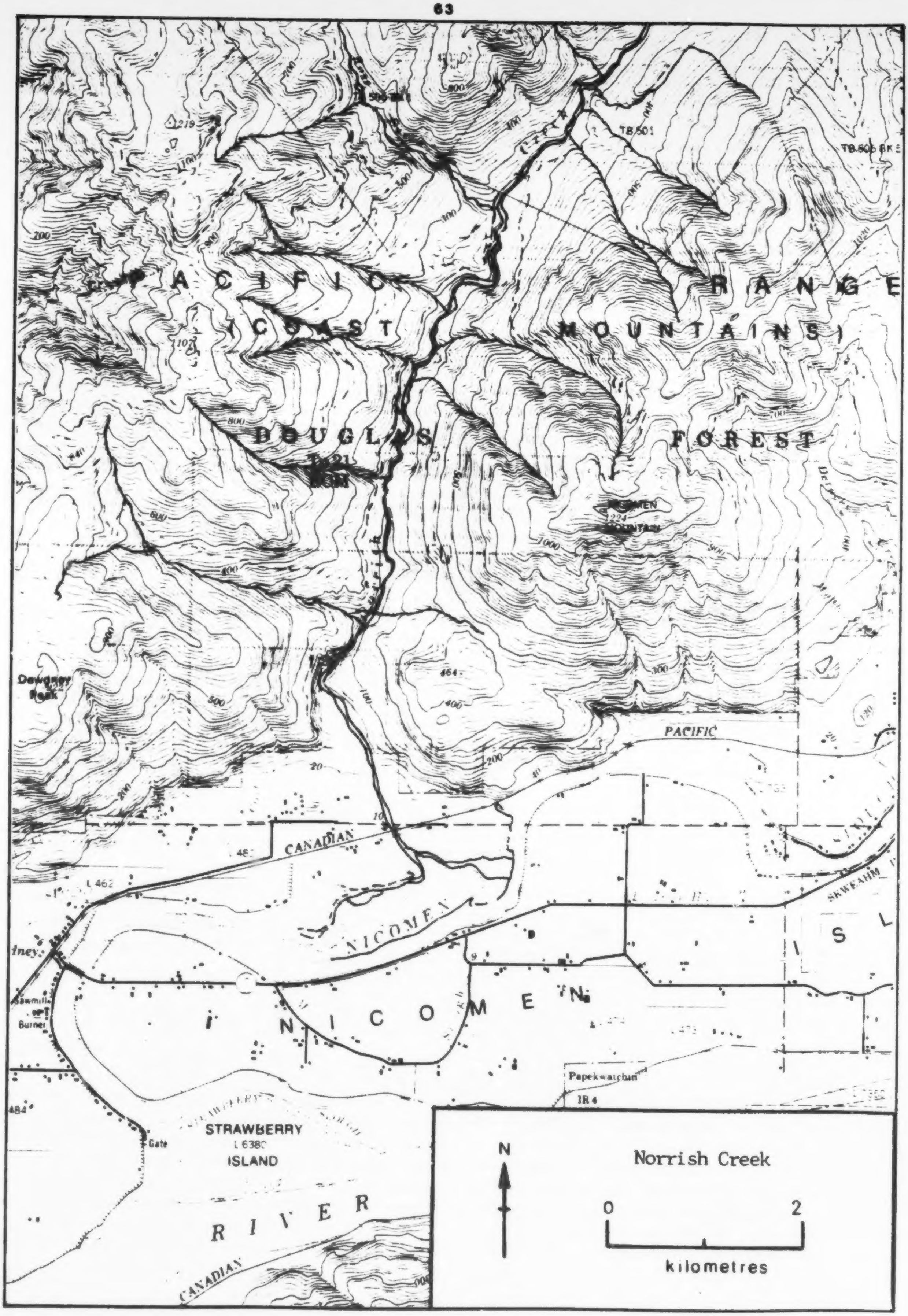
TIMING:

Arrive			SEP-NOV	OCT-NOV		
Start			OCT-NOV	OCT-NOV		
Peak			DEC	NOV-DEC		
End			JAN-MAR	DEC		

REMARKS

Escapements include a number of small tributaries flowing into Nicomen Slough.

1983/84 Totals include Barnes, Brousseau, Crazy and Railway Creeks.


PACIFIC RANGE
(COAST MOUNTAINS)
DOUGLAS FOREST
NICOMEN MOUNTAIN
Dewdney Peak
PACIFIC
CANADIAN
NICOMEN
NICOMEN ISL
Sawmill
Burner
Gate
Papekwatchin
IR 4
STRAWBERRY
L 6380
ISLAND
RIVER
CANADIAN
SKWEAHM
Norrish Creek
N
0
2
kilometres

NAME OF STREAM NORRISH CREEK RAB NO. 00-0552-020

LOCAL NAME (Suicide Creek)

DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 122 SE.

LOCATION OF MOUTH Flows S. and W. into Nicomen Slough, E. of Hatzic L., New Westminster Dist.

LENGTH 21.5 km WIDTH 18 m DRAINAGE km^2

DISCHARGE (m^3/s) MAX 214 Nov 26, 1963 MIN .776 Sept.16, 1973

Temperature (°C) 3.9 (Feb. 16/71)

COMPOSITION: Bedrock Boulder 60% Coarse 14% Fine 11%

Silt & Sand 12% Unclassified 3%

Barriers or Points of Difficult Ascent:

Although the creek is accessible over its length, no salmon have been seen above the lower canyon at 6 km. There may be difficulties depending on water levels.

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- to Rose Creek
chum	- to lower canyon

GENERAL REMARKS

Some areas above canyon have extremely good spawning gravel.

1954 The watershed is being logged off very rapidly by two different companies. Their operations have eliminated forest cover and the stream bed is now subjected to flash floods which makes for a very unstable streambed.

1966 Gravel removal operations carried out by C.P.R.will completely alter the flow and conditions of this stream.Eggs and spawning fish have been killed by this operation.

1968 Continued gravel operations are destroying fish habitat. The area known as West Channel was also lost this year due to a dyke construction

1979 Very fast moving following rains. Mortality to spawners 100%. Dykes on West side slowly eroding away. Possibility of breakthrough.

1982 100% of spawning area scoured during Jan.flood.

1983 Stream frozen at end of December 1983. 11 stream inspections done this season. 100% loss due to heavy rains Jan. 1984.

1984 Heavy sports fishery this fall. Mud slide below intake sight causing silted water. Stream best enumerated by helicopter. Cold temperatures and stream freezing over made coho enumeration difficult in late run.

Usual seasonal fluctuations in water levels.

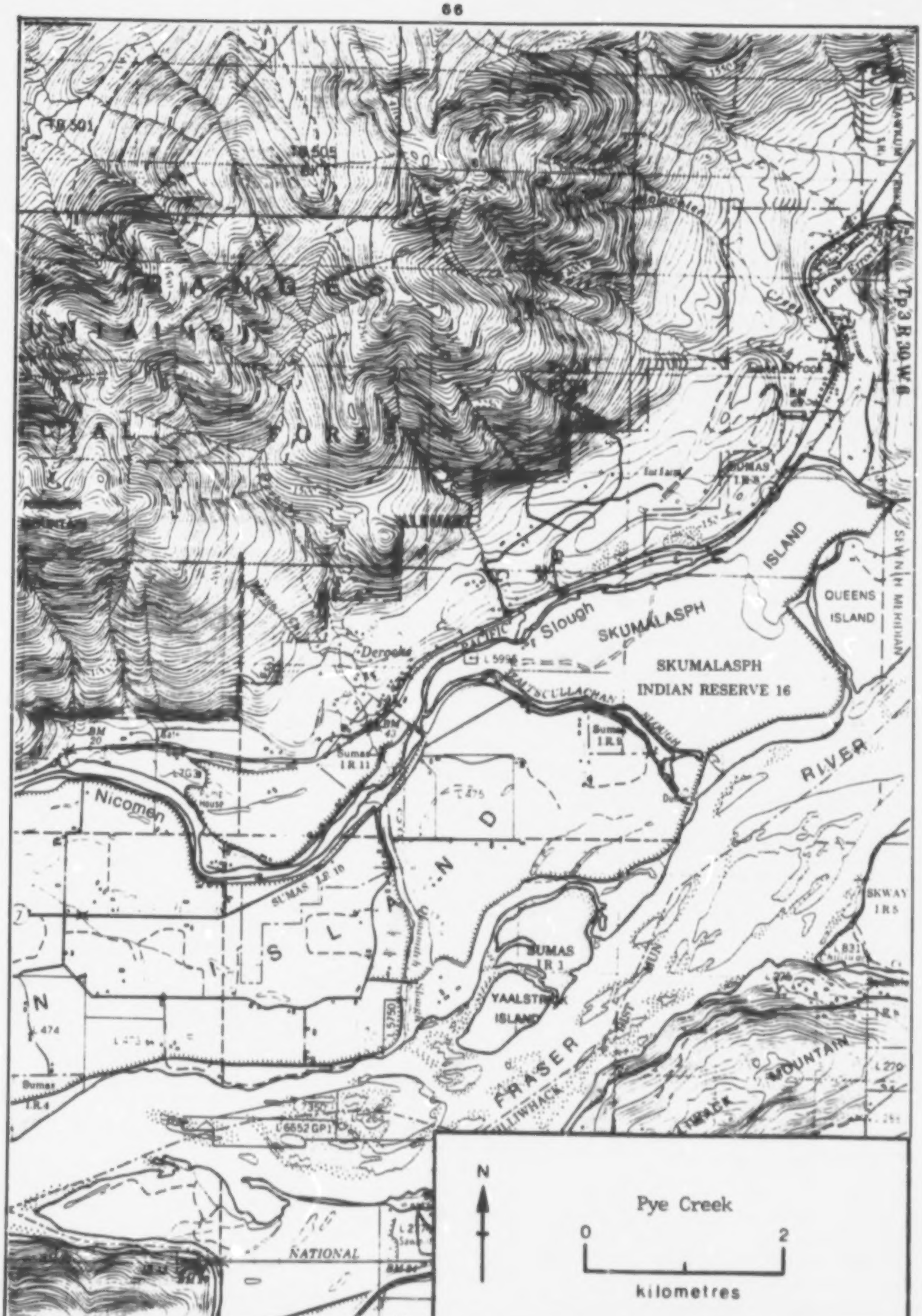
ESCAPEMENT RECORD FOR NORRISH CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			25	750	750	25
48				200		
49			400	750	75	
50			400	400		
51			NO REC	NO REC		
52			1500	200		200
53			400	400	25	200
54			3500	75		400
55			400	1500	200	75
56			75	200		200
57			200	200	25	UNK
58			400	75		
59			400	25	N/O	25
60			400	200		200
61			300	200	25	25
62			400	25		25
63			200	25		25
64			750	25		200
65			200	400		
66			200	200		
67			400	400		
68			400	3500		
69			400	3500		
70			200	1500		
71			1500	750		
72			200	1500		
73			400	750		
74			400	1500		
75			400	7500		
76			200	1500		
77			400	4000		
78			400	3500		
79			200	7500		
80			750	4500		
81			200	9100		
82			150	2200		
83			300	2500		
84			900	2260		
85						

TIMING:

Arrive			OCT-NOV	SEP-OCT		
Start			OCT-NOV	OCT		
Peak			DEC	NOV		
End			JAN-FEB	DEC-JAN		

REMARKS


Pye Creek
N
0
2
kilometres
RANGES
FOREST
SKUMALASPH
Slough
SKUMALASPH
INDIAN RESERVE 16
ISLAND
QUEENS
ISLAND
RIVER
FRASER
Nicomen
Dergoke
SUMAS
I.R.1
YAALSTRICK
ISLAND
SUMAS
I.R.8
Sumas
I.R.11
Sumas
I.R.9
Sumas
I.R.4
SUMAS I.R. 10
SKWAY
I.R.5
MOUNTAIN
CHILLIWHACK
NATIONAL
Lake Errock
Tp 3 R 30 W 6
PACIFIC
HATSCULLACHAN
SLOUGH
SEVENTH MERIDIAN

NAME OF STREAM PYE CREEK RAB NO. 00-0552-050

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 122 SE.

LOCATION OF MOUTH Flows SE. into Nicomen Slough, NE. of Deroche, New Westminster Dist.

LENGTH .80 km WIDTH 11 m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature ($^{\circ}$C) 5 (Feb. 16/71)

COMPOSITION: Bedrock Boulder Coarse 15% Fine 25%

Silt & Sand 60% Unclassified

Barriers or Points of Difficult Ascent:

Impassable road culvert 106m from mouth — stream above culvert is usually dry.

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- from mouth to railway

GENERAL REMARKS

1959	Quantities of good gravel above culverts.
1963	Stream above culvert is stable and has good cover.
1969	Area above culvert is usually dry in summer and loss of fry would be heavy.
1975	Creek was diverted in December flood and is near a total loss.
1976	Some work done by Dept. of Highways and C.P.R. which affects stream.
1979	Rain storm in December greatly affected the spawning area of this creek. Extensive scouring — course of stream below railway tracks altered. Dead coho fry observed. Probably 100% mortality to spawners .
1981	Lack of sufficient flow a problem in early season.
1983	8 stream inspections done this season. 100% loss of spawners due to heavy rains in Jan. 1984.
1984	Stream walked 9 times this year. C.P.R. conducted wome work on the culvert this year.

Extensive scouring and silting in recent years. Water levels seem to be lower every year (79)

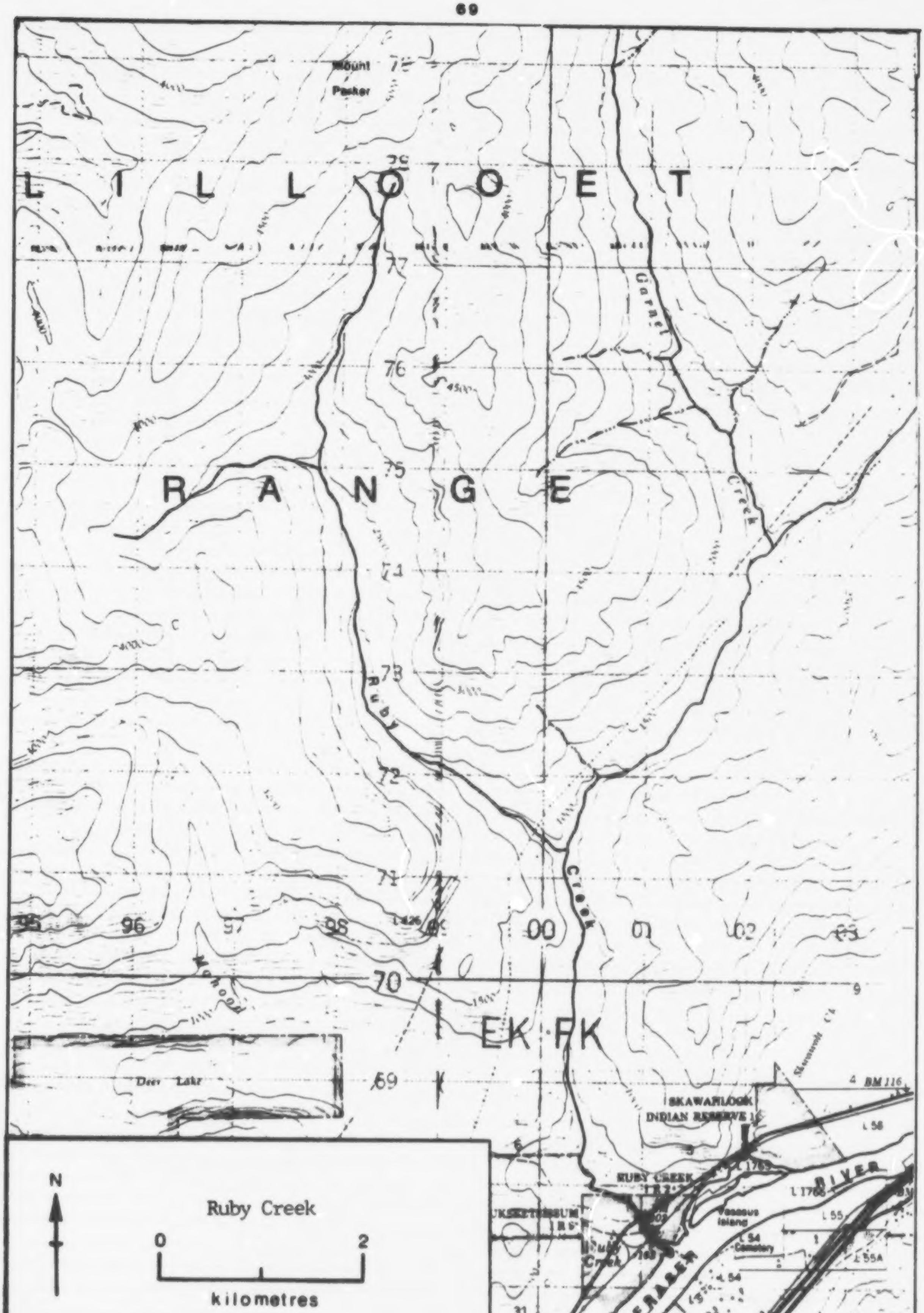
ESCAPEMENT RECORD FOR PYE CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51			NO RECORDS PRIOR TO 1953			
52						
53			200			
54			NO REC			
55			NO REC			
56			NO REC			
57			200			
58			25			
59			25			
60			25			
61			25			
62			200			
63			25			
64			200			
65			75			
66			200			
67			75			
68			75			
69			25			
70			200			
71			200			
72			25			
73			75			
74			75			
75			25			
76			25			
77			400			
78			1978 DATA INCLUDED WITH NICOMEN SLOUGH			
79			200			
80			150			
81			175			
82			50			
83			20			
84			175			
85						

TIMING:

Arrive			OCT-NOV			
Start			OCT-DEC			
Peak			M. DEC-JAN			
End			DEC-JAN			

REMARKS


Mount Parker
LILLOOET
RANGE
Garnet Creek
Ruby
Creek
Mahood
Deer Lake
SKAWAHLOOK INDIAN RESERVE 1
RUBY CREEK I R 2
Ruby Creek
FRASER
RIVER
Cemetery
BM 116
95
96
97
98
00
01
02
03
77
76
75
74
73
72
71
70
69
N
Ruby Creek
0
2
kilometres

NAME OF STREAM RUBY CREEK RAB NO. 00-0750

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 121 SW.

LOCATION OF MOUTH Flows S. into Fraser R., E. of Harrison L., Yale Dist.

LENGTH 3.2 km WIDTH 11 m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C) 5 (Mar. 2/71)

COMPOSITION: Bedrock 1% Boulder 64% Coarse 17% Fine 9%

Silt & Sand 3% Unclassified 6%, pools

Barriers or Points of Difficult Ascent:

Impassable canyon falls at 3.2km

10% of the area above falls has potential as spawning grounds

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chum	- mainly near mouth
coho	- in canyon pools
pink	- scattered throughout

GENERAL REMARKS

1969/69	Subject to severe flood damage during freshets. Stream unstable from logging. Very rocky, limited gravel. 1965 reported serious damage to pink and chum redds. 75% erosion and silting, serious scouring.
1979	100% loss of pinks and chum due to mid December flood.
1981	Chum down considerably from brood year. Helicopter best method on this stream.
1982	Stream is prone to flash floods caused by heavy logging activity.
1983	12 stream inspections done this season. 70% loss of spawners due to heavy rains January 1984.
1984	Stream walked 3 time this year.

Recent years report normal seasonal fluctuations in water levels — slight erosion and silting.

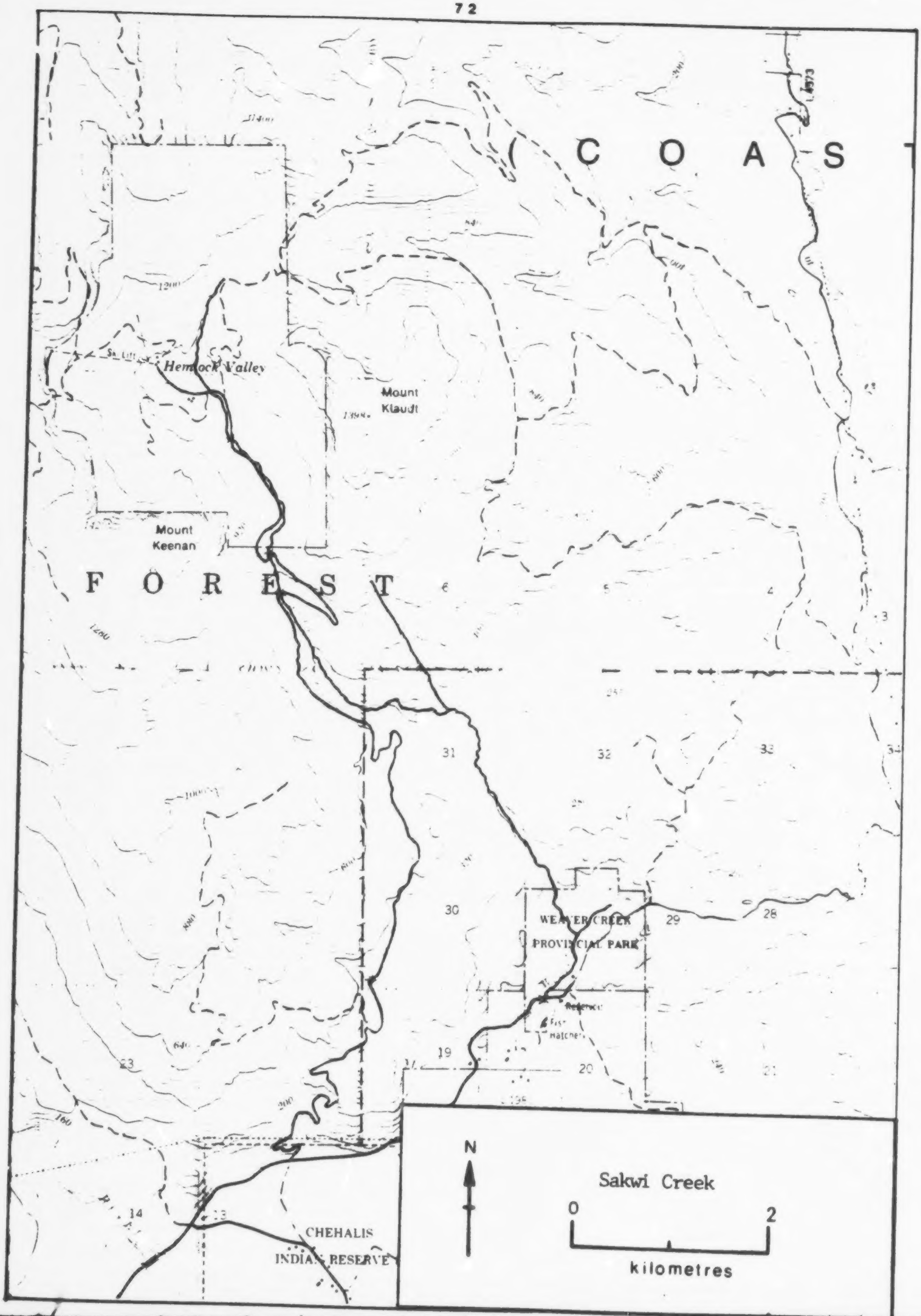
ESCAPEMENT RECORD FOR RUBY CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58			NO RECORDS PRIOR TO 1960			
59						
60			UNK	UNK		UNK
61			UNK	UNK	650	UNK
62						
63			UNK	25	614	UNK
64			25	25		UNK
65			25	25	221	25
66			25	25		25
67			25	25	400	
68			25	25		
69			25	25	75	
70			25	25		
71			200	25	1500	
72			25			
73			25	25	750	
74			25	25		
75			25	25	75	
76			25	25		
77			25	25	75	
78			25	25		
79			25	25	750	
80			50	25		
81			N/O	25	250	
82			10	N/O		
83			UNK	30	2226	
84			N/O	50	-	
85						

TIMING:

	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
Arrive			OCT-DEC	SEP-OCT	SEP	
Start			OCT-DEC	SEP-OCT	SEP	
Peak			NOV-JAN	OCT-NOV	OCT	
End			DEC-JAN	NOV	OCT	

REMARKS


(C O A S T
F O R E S T
Hemlock Valley
Mount Klaudt
1398
Mount Keenan
1200
1280
1400
1000
880
640
200
160
WEAVER CREEK PROVINCIAL PARK
Reservoir
Fish Hatchery
CHEHALIS INDIAN RESERVE
6
5
4
3
31
32
33
34
30
29
28
19
20
21
23
14
13
N
Sakwi Creek
0
2
kilometres

NAME OF STREAM SAKWI CREEK RAB NO. 01-0500-010-010

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 121 SW.

LOCATION OF MOUTH Flows into Weaver Creek

LENGTH ____ km WIDTH ____ m DRAINAGE ____ km^2

DISCHARGE (m^3/s) MAX ____ MIN ____

Temperature (°C) ____

COMPOSITION: Bedrock ____ Boulder ____ Coarse ____ Fine ____
Silt & Sand ____ Unclassified ____

Barriers or Points of Difficult Ascent:

Impassable after 3.2km due to gradient

SPAWNING DISTRIBUTION

Species	Section of Stream Used
sockeye	- distributed over first 1.2km
coho	- " " "
chum	- " " "

GENERAL REMARKS

1979	Rain storm in December caused considerable scouring to stream bed. Stream is subject to much gravel shifting -- a very unpredictable stream. Improved fishway installed at water intake.
1981	Subject to silting and scouring during rainy periods.Figures for sockeye included with Weaver Creek.
1982	100% loss due to floods.
1983	A very fast moving and rocky stream. This years concentration of chum were in Weaver Creek rather than Sakwi. 9 stream inspections were done this season. 100% loss of spawners due to heavy rains Jan.
1984	Stream walked 7 time this year.

Water levels fluctuate severely at times due I.P.S.C.intake for spawning channel (1984)

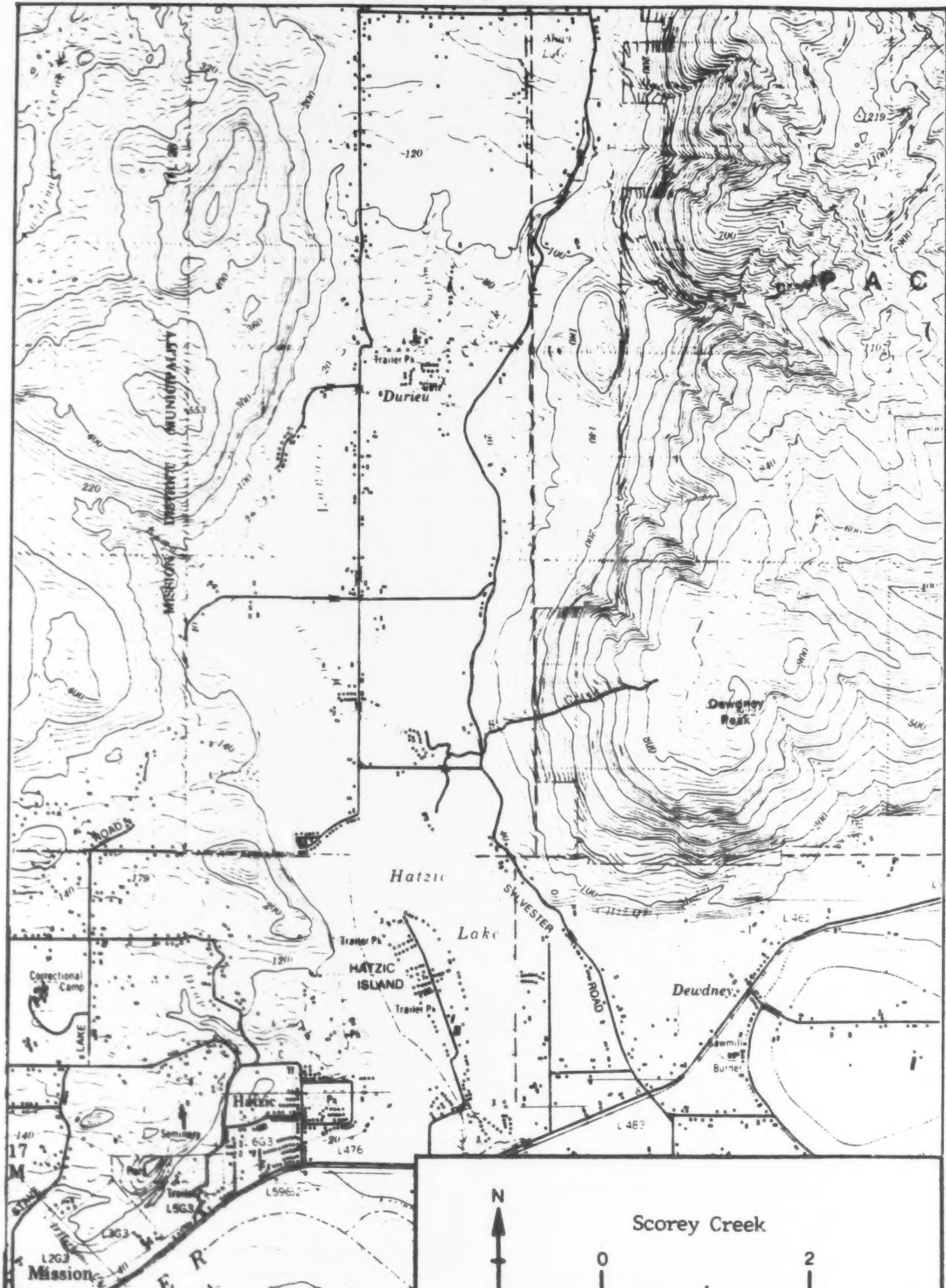
ESCAPEMENT RECORD FOR (Sakwi Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78	25			75		
79	75		25	1500		
80	100		50	150		
* 81			20	1200		
82	750		50	1750		
83	25		5	200		
84	UNK		50	275		
85						

TIMING:

Arrive	SEP-OCT		OCT-NOV	SEP-OCT		
Start	SEP-NOV		NOV	OCT-NOV		
Peak	OCT-NOV		NOV-E. DEC	NOV		
End	NOV		L. DEC	NOV-DEC		

REMARKS * 1981 Sockeye figs included in Weaver Creek.


Scorey Creek
N
0
2
kilometres
Durieu
Trailer Pk
Hatzic
Lake
HATZIC
ISLAND
Dewdney
Dewdney Peak
SYLVESTER
ROAD
MISSION DISTRICT MUNICIPALITY
Correctional Camp
LAKE
Hatzic
Seminary
Mission
F R A S E R
Sawmill
Burner
L 476
L 483
L 462
L 3880A
L 3879A
L 69
L2G3
L3G3
L5G3
6G3
L5962
17
M
P A C
Alvin Lake
219
700
500
220
179
120
140
100

NAME OF STREAM SCOREY CREEK RAB NO. 00-0500-030

LOCAL NAME (Rouleau Creek)

DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 122 SE

LOCATION OF MOUTH Flows W. into Hatzic Slough, N. of Hatzic Lake, New Westminster Dist.

LENGTH 2.4 km WIDTH 3.65 m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C) 6 (Feb.22, 1971)

COMPOSITION: Bedrock Boulder 10% Coarse 10% Fine 27%
Silt & Sand 50% Unclassified 3% pools

Barriers or Points of Difficult Ascent:

Impassable high land at 2.4km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho chum	- scattered throughout - scattered throughout

GENERAL REMARKS

1952 Migrants to and from this stream pass through Hatzic Pumping Station. Water levels were adequate in upper portion of stream but salmon were unable to pass through the delta area.
1955 25% of brood year in spite of ideal water conditions.
1959 This stream has had good runs in the past, but like all other Hatzic tributaries, the runs have been lost.
1962/69 No longer a producer — runs have been lost to rural development.
1970/75 Just a few coho.
1976/79 No fish seen.
1981 Silt heavy in lower reaches.
1982 Heavy silting in lower reaches — some scouring during high water. Heavy rain in Jan. 1983 caused severe damage.
1983 Some dredging of stream in summer of '83. 7 stream inspections done this season. 100% loss of spawners due to heavy rains on Jan. 3 - 5 ,84.
1984 Stream walked 8 times this year.Heavy silting in lower reaches.

Predation by birds ('82/'84)

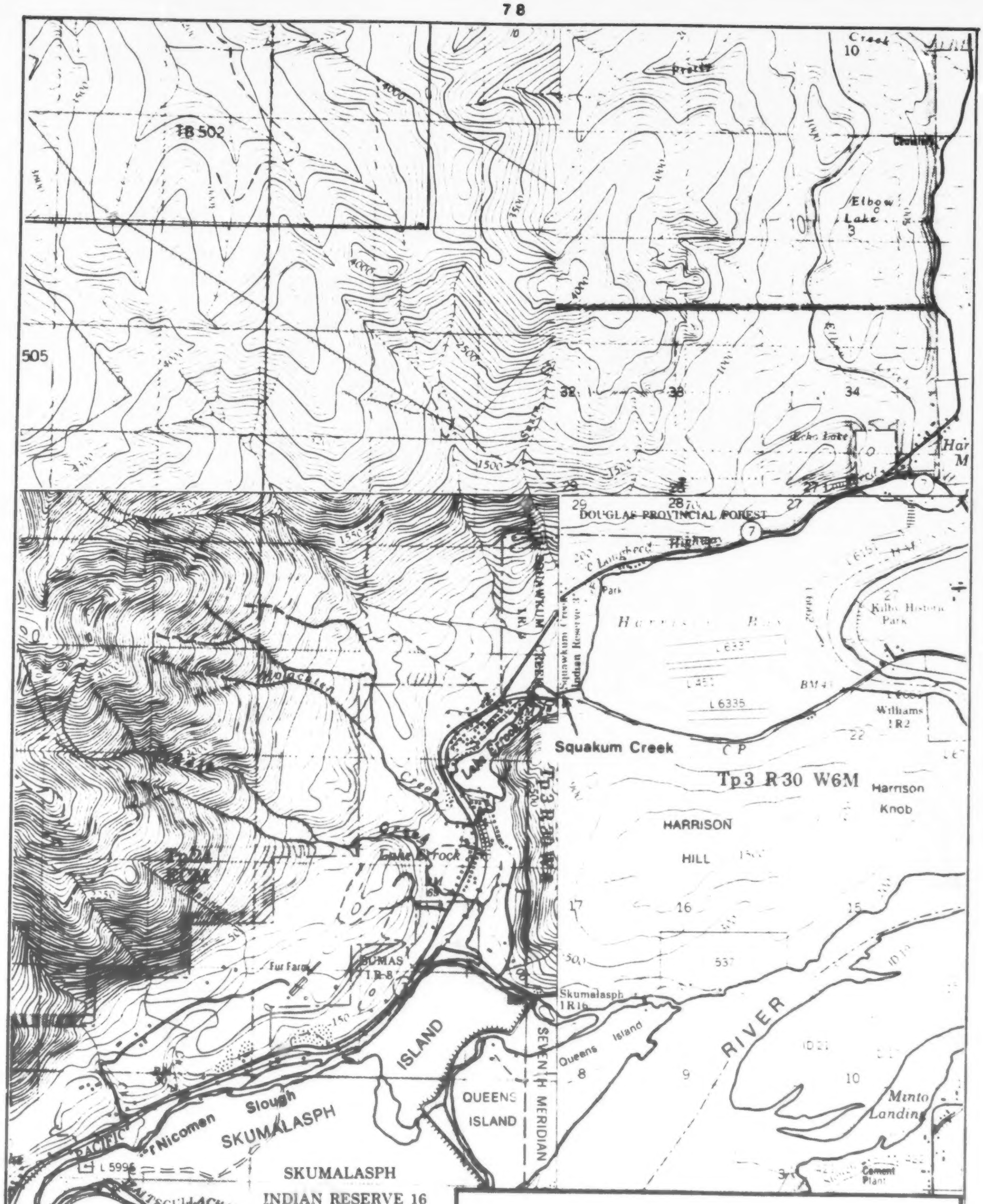
ESCAPEMENT RECORD FOR SCOREY CREEK (Rouleau Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49			200	75		
50				25		
51			25	25		
52			200	25		
53			25	25		
54			75	25		
55			25			
56			N/O			
57			25	25		
58			25	25		
59			25	25		
60			25	N/O		
61			25			
62			N/O			
63			N/O			
64			25			
65			N/O			
66			N/O			
67			N/O			
68			N/O			
69			N/O			
70			N/O			
71			25			
72			NO REC			
73			25			
74			25			
75			25			
76			N/O			
77			N/O			
78			N/O			
79			N/O			
80			25	50		
81				25		
82			100	150		
83			20	60		
84			N/O	200		
85						

TIMING:

Arrive			NOV	OCT-NOV		
Start			NOV	L. OCT-NOV		
Peak			DEC	M. NOV		
End			JAN	M. DEC		

REMARKS


Siddle Creek
N
0
2
kilometres
TB 502
505
Elbow Lake
Echo Lake
DOUGLAS PROVINCIAL FOREST
Lougheed Highway
7
Harrison Bay
Kilby Historic Park
Williams IR 2
Squakum Creek
Squawkum Creek Indian Reserve
Tp3 R30 W6M
Harrison Knob
HARRISON HILL
Lake Errock
Fur Farm
SUMAS IR 8
Skumalasph IR 16
Queens Island
ISLAND
QUEENS ISLAND
SEVENTH MERIDIAN
RIVER
Minto Landing
Cement Plant
Nicomen Slough
PACIFIC
SKUMALASPH
SKUMALASPH INDIAN RESERVE 16
HATSCULLACHAN SLOUGH
Sumas IR 9
FRASER
L 5996
L 475
C P
32
33
34
29
28
27
22
17
16
15
8
9
10
1500
2500
3500
4000

NAME OF STREAM SIDDLE CREEK RAB NO. 01-0100-010

LOCAL NAME (Bell's Creek, Tatham Creek)

DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 13 122 01

LOCATION OF MOUTH Flows S. into Nicomen Slough, New Westminster Dist.

LENGTH ______ km WIDTH ______ m DRAINAGE ______ km^2

DISCHARGE (m^3/s) MAX ______ MIN ______

Temperature (°C) ______

COMPOSITION: Bedrock ______ Boulder 38% Coarse 23% Fine 20%
Silt & Sand 15% Unclassified 4%

Barriers or Points of Difficult Ascent:

Impassable due to high land 3.2km upstream and beaver dams near mouth.

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chum	- mainly in lower reaches
coho	- from mouth to 100 yds above hwy.culvert

GENERAL REMARKS

1950/59 This stream is dredged yearly by Provincial Public Works with resultant damage to redds. Flood control work is destroying fish habitat. 1956 Reported 90% erosion and silting — upper stream badly scoured.

1962 Gravel removal for road fill (C.P.R.)

1963 C.P.R. Culvert too small, and plugs up every winter. Log jams and beaver dams at mouth are impassable except for very high water. Recommend removal.

1968 Flood control work must be done between June 1 and Oct. 31 if runs are not to be lost.

1969/71 No problems with C.P.R. Flood control.

1973 The new awareness of the general public to environmental problems is an asset in an area such as this. Residents report almost immediately any problems that occur.

1977 C.P.R. requires annual cleaning and gravel removal to protect culverts on right of way. Permanent solution sought.

1979 During high water on December 14th, C.P.R. had to put a cat in the creek to re-inforce the bank to protect the railway bed. All spawning up to this date approx 100% mortality.

continued.....

continuation

SIDDLE CREEK

1982 Extreme high flows in Jan. 1983. 100% loss above railway track. Cat work in creek was necessary to prevent property damage. Continual problems with beaver dam removal. Dams removed on 13 occasions this season. No coho observed until first week in December. 14 stream inspections made this fall.

1983 Coho far below expectations. A very poor return. Continual problems with beaver dams. 7 stream inspections made this year. 45% loss of spawners due to heavy tains on Jan 3 to 5, 1984.

1984 Ongoing problems with beaver dams. Stream was walked 8 times this season

Physical conditions: This stream is subject to heavy erosion, silting and scouring. Very high water levels during winter rains. Gravel threatens C.P.R.bridge on occasions (76)

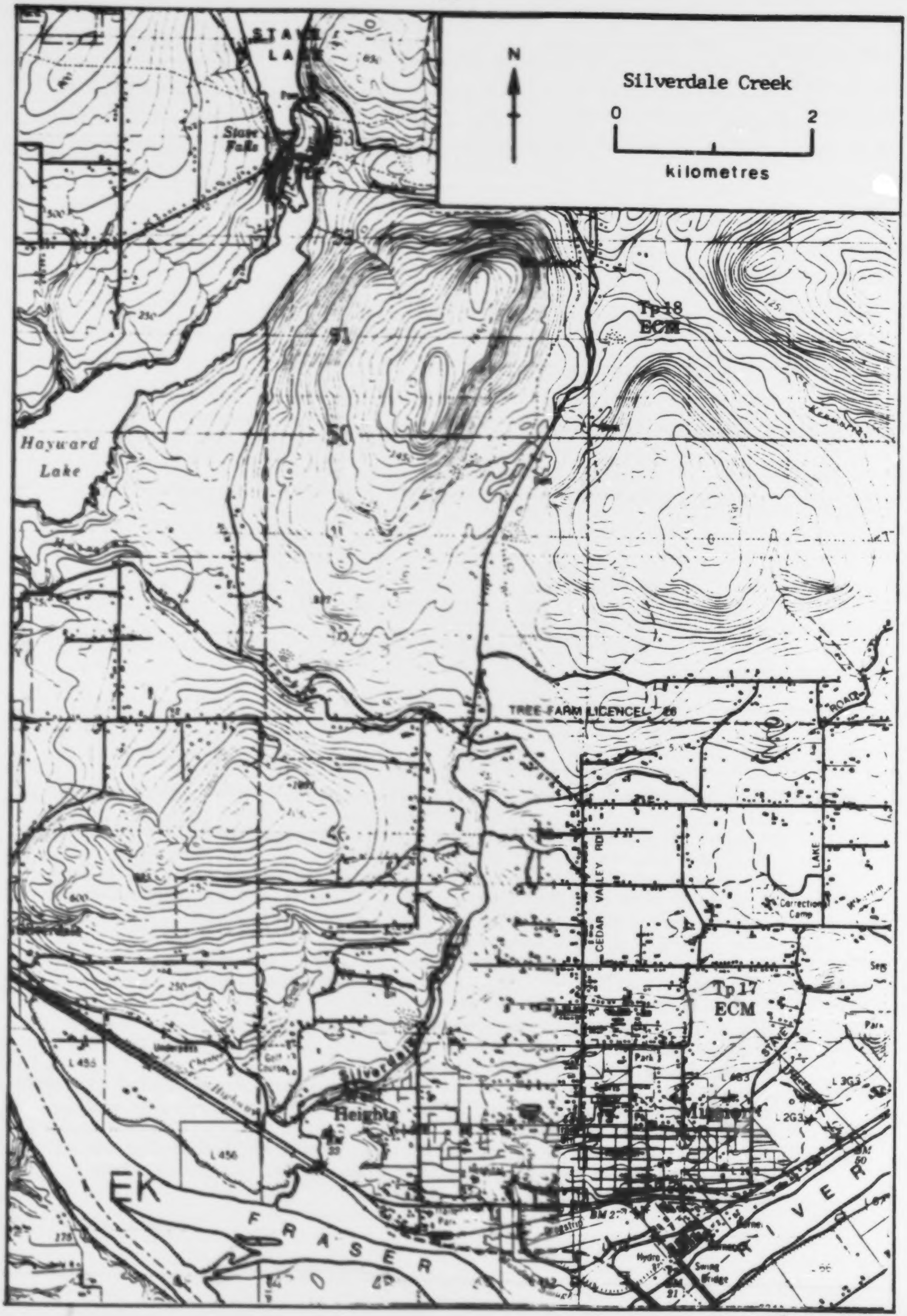
Predation: Youths frequently molest coho(1977/83)

ESCAPEMENT RECORD FOR SIDDLE CREEK (Bell's Cr., Tatham Cr.)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50			75	25		
51			75	75		
52			NO RECORD			
53			200	25		
54			200	25		
55			25	25		
56			25	25		
57			200	200		
58			25	25		
59			25	25		
60			25	25		
61			75	25		
62			400	25		
63			75	25		
64			400	25		
65			75	25		
66			200	200		
67			200	25		
68			750	25		
69			750	25		
70			750	25		
71			400	25		
72			200	25		
73			400	25		
74			750	75		
75			750	25		
76			750	25		
77			1500	25		
78			200	25		
79			400	25		
80			800	75		
81			400	25		
82			350	20		
83			320	10		
84			450	N/O		
85						

TIMING:						
Arrive			OCT-DEC	OCT-DEC		
Start			NOV-DEC	OCT-DEC		
Peak			DEC	NOV-DEC		
End			JAN	DEC		

REMARKS


Silverdale Creek
N
0
2
kilometres
STAVE LAKE
Stave Falls
Hayward Lake
Tp 18 ECM
TREE FARM LICENCE 26
ROAD
CEDAR VALLEY RD
LAKE
Correction Camp
Tp 17 ECM
Silverdale
Heights
Mission
Golf Course
Underpass
L 455
L 456
L 633
L 3G3
L 2G3
EK
FRASER RIVER
Hydro
Swing Bridge
Park

NAME OF STREAM SILVERDALE CREEK RAB NO. 00-0435

LOCAL NAME (Silver Creek)

DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 122 SE.

LOCATION OF MOUTH Flows S. into Fraser R., E. of Stave River, New Westminster Dist.

LENGTH 7 km WIDTH 7 m DRAINAGE km^2

DISCHARGE (m^3/s) MAX 15.1E Dec.2, 1975 MIN 0.068 Aug. 14, 1979

Temperature (^{o}C) 5.5 (Feb. 23,1971)

COMPOSITION: Bedrock Boulder 30% Coarse 20% Fine 22%

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

Impassable falls 7.2km from mouth — beaver dams

SPAWNING DISTRIBUTION

Species	Section of Stream Used
sockeye	- scattered throughout
coho	- to falls
chum	- to Tyler Road
pink	- scattered throughout

GENERAL REMARKS

1950/59	This is a very fine little stream, but an escapement of not less than 1500 chum is required for a proper seeding.
1953	Mission City storage dam has been removed and this permits coho to enter the upper reaches of this stream.
1954	Upper half of spawning grounds were logged over this fall.
1955	Runs to this stream would benefit from closure of commercial fishery east of Westminster. This stream could accomodate 10 to 20 times as many spawners without overcrowding.
1957	Heavy loss of redds may be the cause of light pink run.
1959	Coho smolts suffer in summer months because of increasing demands for water from the creek by farmers.
1963	Stream clearance work required. Too many water licences issued.
1964	A large part of this run was caught in the Oct 7th opening of the Fraser River salmon gillnet fishery.
1965	A new sawmill has been built at the mouth of this stream. Land adjacent to best spawning grounds has been developed into pasture land and is being developed by agriculture.
1970	A rockfall was made passable during the coho migration by the use of sandbags. Suggest blasting steps in this rockfall to allow coho to ascend a considerable distance upstream.

continued.....

continued

SILVERDALE CREEK (Silver Creek)

1973/79	Continued rural development with resulting deterioration of water quality presents a major threat to this stream.
1981	Possibility of Industrial Zone above Dewdney Trunk Road. Coho half of brood year.
1982	Heavy losses due to flooding.Incubation box on creek this year.
1983	Coho down considerably. 9 stream inspections done this season. Coho and chum boxes unaffected by the heavy rains. 70% loss of spawners due to heavy rains in January 1984.
1984	Stream was walked 10 time this year. Late run of chum didn't show up. Late run of coho was difficult to enumerate due to cold weather and creek freezing over in upper reaches, therefore coho total is rough estimate.

Physical condition: 1981/82 reported heavy silting in lower reaches. 1983/84 reported moderate silting in lower reaches. Water levels mostly normal with high water during winter rains.

Fish molesting can be a problem as creek is situated in a populated area.

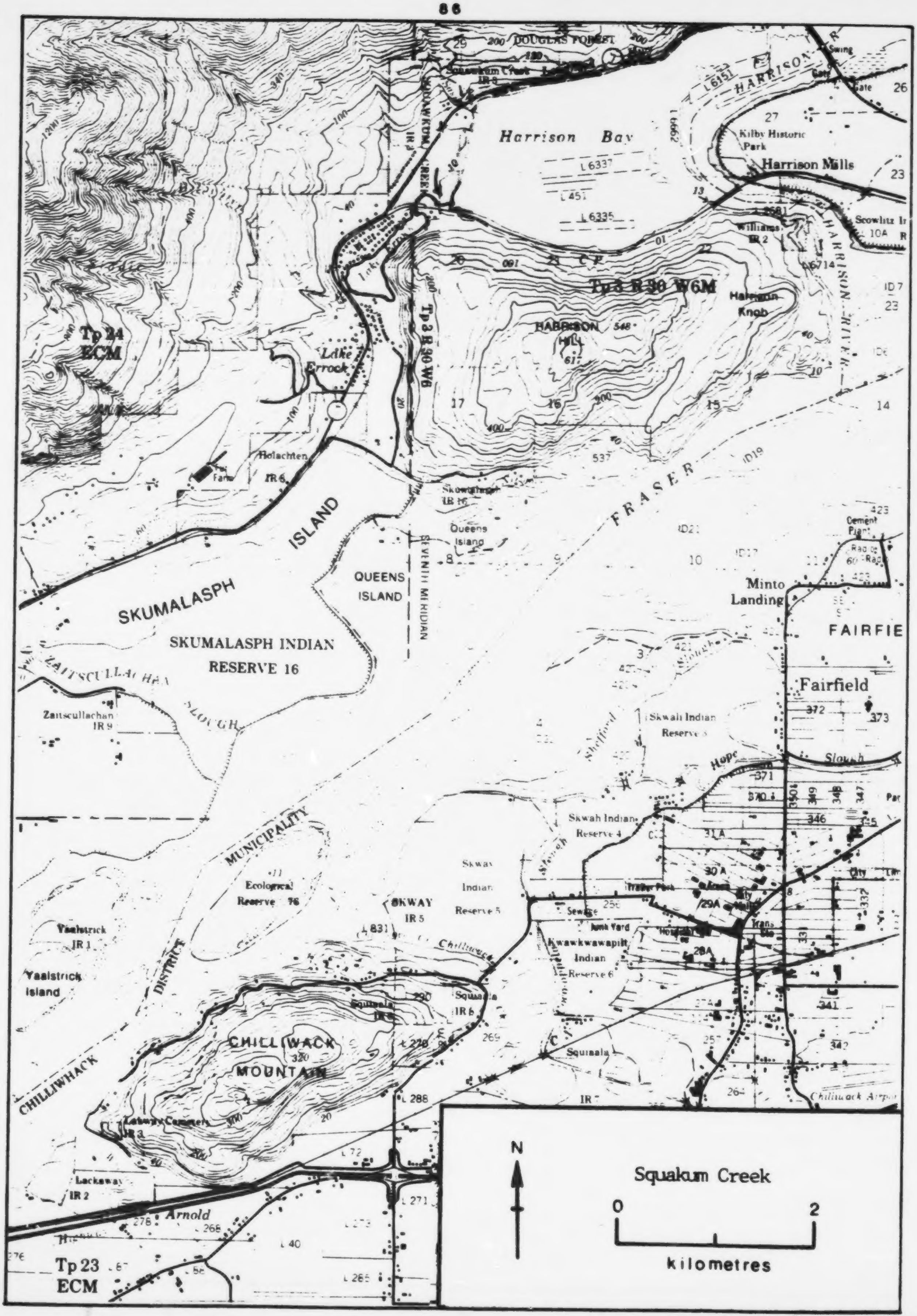
ESCAPEMENT RECORD FOR SILVERDALE CREEK (Silver Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			25	200	1500	
48				25		
49			25	400	3500	
50			25	400	25	
51			400	750	400	75
52			750	1500		200
53			200	400	400	
54			200	200		UNK
55			200	400	400	
56			25	75		
57			200	400	75	
58			75	200		
59			200	350	68	
60			25	45		
61			75	200	75	
62			200	300		
63			200	550	151	
64			200	25		
65			200	270	3	
66			200	200		
67			200	400	75	
68			75	750		
69	25		200	750	75	
70	25		400	750		
71			400	75	25	
72			75	750		
73	25		400	750	75	
74	25		400	750		
75	25		200	400		
76			25	75		
77			250	650		
78			200	400		
79			200	400	25	
80			200	600		
81			100	2250		
82			100	350		
83			50	300		
84			200	205		
85						

TIMING:

Arrive	OCT		OCT	SEP-OCT	OCT	
Start	OCT		OCT	SEP-OCT	OCT	
Peak	OCT-NOV		NOV-DEC	OCT-NOV	OCT	
End	NOV-DEC		DEC-FEB	DEC-JAN	NOV	

REMARKS


Squakum Creek
N
0
2
kilometres
Harrison Bay
Harrison Mills
Kilby Historic Park
HARRISON R.
HARRISON RIVER
Tp3 R30 W6M
Harrison Knob
HARRISON HILL
Tp 24 ECM
Lake Errock
SQUAKUM CREEK
Tp3 R30 W6
Holachten IR 6
SKUMALASPH ISLAND
SKUMALASPH INDIAN RESERVE 16
Skowahlagh IR 16
Queens Island
QUEENS ISLAND
SEVENTH MERIDIAN
FRASER
Minto Landing
FAIRFIE
Fairfield
Skwah Indian Reserve 3
Hope Slough
Skwah Indian Reserve 4
Skway Indian Reserve 5
SKWAY IR 5
Kwawkwawapilt Indian Reserve 6
Squiaala IR 6
Squiaala
ZAITSCULLACHAN SLOUGH
Zaitscullachan IR 9
MUNICIPALITY
DISTRICT
CHILLIWHACK
Ecological Reserve 76
Yaalstrick IR 1
Yaalstrick Island
CHILLIWACK MOUNTAIN
Lackaway IR 2
Arnold
Tp 23 ECM
DOUGLAS FOREST
Scowlitz Ir 10A
Williams IR 2
Cement Plant
Sewage
Junk Yard
Trailer Park
Chilliwack Airport

NAME OF STREAM (Squakum Creek) RAB NO. 01-0100

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 122 SE.

LOCATION OF MOUTH Flows NE. from Suqakum L. into Harrison Bay, New Westminster Dist.

LENGTH 1.6 km WIDTH 7.3 m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C) 6.7 (March 7, 1965)

COMPOSITION: Bedrock Boulder Coarse 15% Fine 55%

Silt & Sand 30% Unclassified

Barriers or Points of Difficult Ascent:

beaver dams throughout — monitored and removed at migration time

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chum	- in Harrison Bay off mouth of Squakum and in small side channel adjacent to Squakum Creek.
coho	- throughout — mainly in upper regions and tributaries.

GENERAL REMARKS

1955 This is a very fine little stream. Water levels are seldom too low and never too high.

1956 Majority of chum could not enter because of low water.

1957 Mouth of stream dry during time of pink run.

1960/69 Lake Errock , which feeds this stream, is rapidly becoming a resort area. Heavy beaver activity caused some problems. This creek runs through an Indian Reserve and has good forest cover.

1971 10,000 coho fry from weaver creek spawning channel were placed into this stream.

1973 Resort area continues to grow. Pinks have been reported for the first time in many years.

1974 Due to the critical low water level in late Oct. approx 5% of the adult female chum died without spawning.

1977 Many beaver in lower reaches. Water levels critical this fall.

1979 15% loss of chum due to mid December flood.

1981 Sizable number of chum spawn in Harrison Bay off mouth of Squakum and in small side channels.

continued.....

continued

(Squakum Creek)

1982 One net removed from stream this year also numerous reports of people taking females for eggs.

1983 Chum return doubled over brood year. 9 stream inspections done this season. 20% loss due to heavy rains in Jan. '84.

1984 Heavy overspawn. Chum in all tributaries of Squakum Lake. Stream walked 10 time this season.

Seasonal fluctuations in water levels. Only light silting and erosion reported in recent years.

Predation: birds, bears, dogs, seals and man

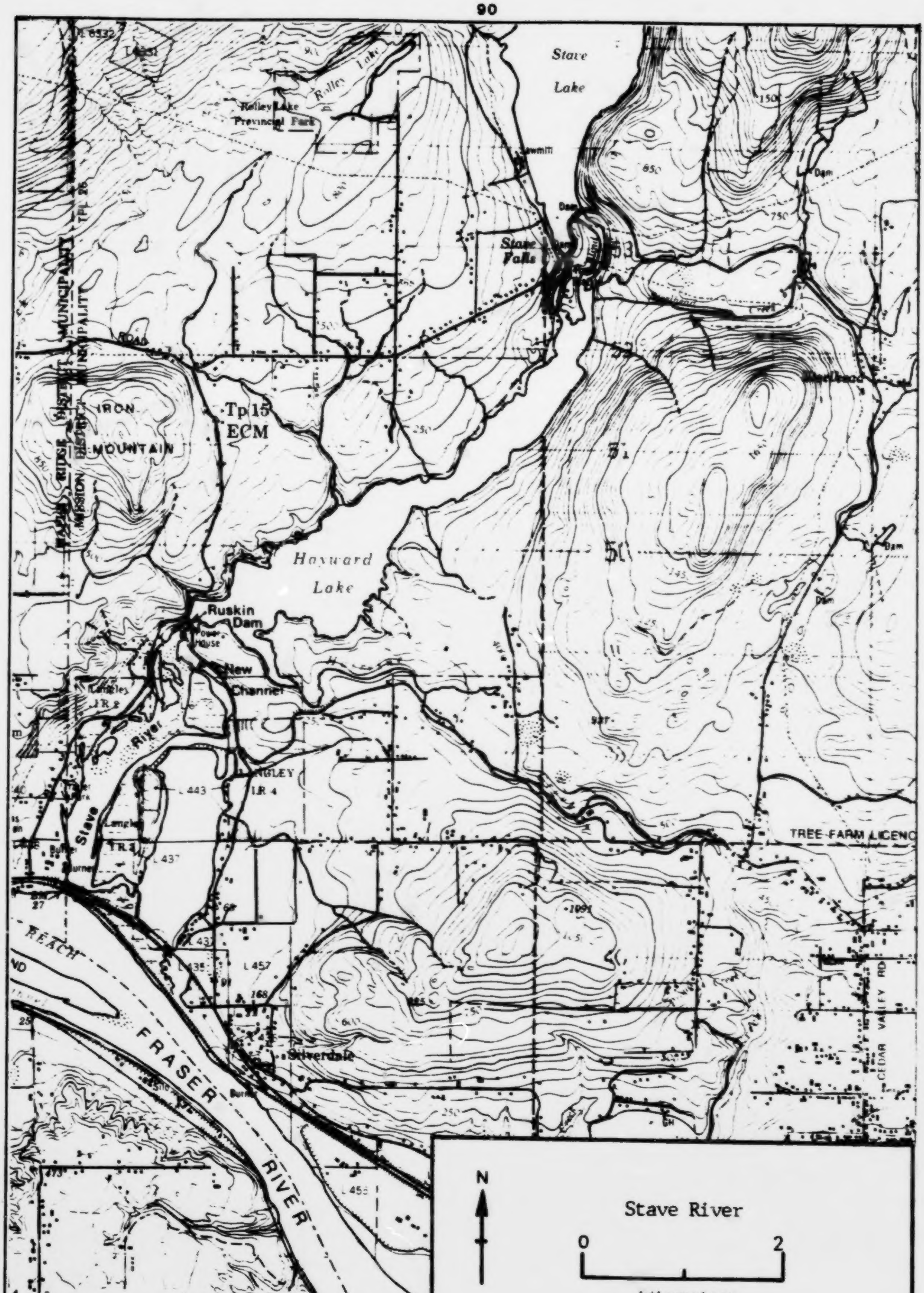
ESCAPEMENT RECORD FOR (Squakum Creek)

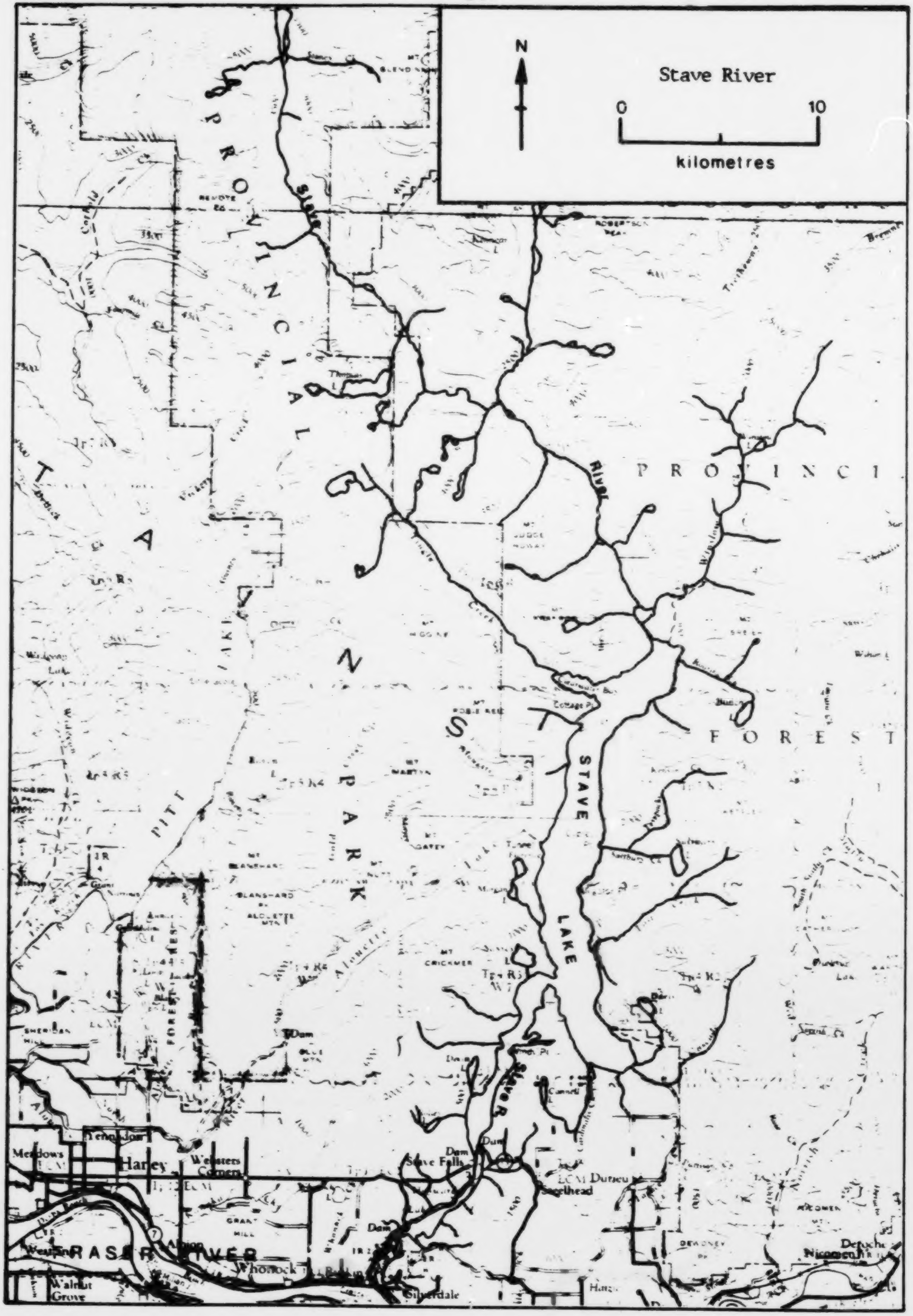
YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			75	1500	400	
48				15000		
49			25	7500	200	
50			200	3500		
51			25	750	25	
52			200	200		
53			400	3500	25	
54			200	1500		
55			75	1000	25	
56			25	400		
57			400	7500		
58			200	2400		
59			200	2000		
60			NO REC	NO REC		
61			200	7500	25	
62			400	3500		
63			200	3000		
64			400	3500		
65			200	3500		
66			750	7500		
67			400	15000		
68			200	7500		
69			400	15000		
70			75	7500		
71			200	7500		
72			75	15000		
73			400	7500	400	
74			200	3500		
75			200	3500		
76			200	3500		
77			150	4500		
78			200	3500		
79			200	3500		
80			125	4500		
81			20	15300	2	
82	300		100	8000		
83	N/O		50	7000		
84	N/O		25	13700		
85						

TIMING:

Arrive	SEP		OCT-NOV	SEP-OCT		
Start	OCT		NOV-DEC	OCT		
Peak	OCT		DEC-JAN	NOV		
End	NOV		JAN-FEB	DEC-M. JAN		

REMARKS


Stave Lake
Rolley Lake
Rolley Lake Provincial Park
Sawmill
Dam
Stave Falls
IRON MOUNTAIN
Tp 15 ECM
MAPLE RIDGE DISTRICT MUNICIPALITY
MISSION DISTRICT MUNICIPALITY
Hayward Lake
Ruskin Dam
Power House
New Channel
Stave River
LANGLEY I.R. 4
Langley I.R. 2
Langley I.R. 3
L 443
L 437
L 435
L 457
L 455
Silverdale
REACH
FRASER RIVER
TREE FARM LICENCE
CEDAR VALLEY RD
Stave River
N
0
2
kilometres


N
Stave River
0
10
kilometres
PROVINCIAL
PARK
PROVINCIAL
FOREST
STAVE LAKE
PITT LAKE
Stave R.
River
MT JUDGE HOWAY
MT CRICKMER
MT BLANSHARD
ALOUETTE MTN
BLUE MTN
GRANT HILL
Dam
Stave Falls
Steelhead
Durieu
Haney
Websters Corners
Meadows
FRASER RIVER
Whonock
Ruskin
Silverdale
Walnut Grove
Nicomen
SHERIDAN HILL

NAME OF STREAM STAVE RIVER RAB NO. 00-0400

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 122 SE.

LOCATION OF MOUTH Flows S. into Fraser River, W. of Harrison Lake, New Westminster District.

LENGTH 2.4 km WIDTH 82 m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (^{o}C) 4.4 (Mar. 25/71)

COMPOSITION: Bedrock Boulder 20% Coarse 35% Fine 20%

Silt & Sand 25% Unclassified

Barriers or Points of Difficult Ascent:

Impassable B.C.Hydro Dam 3.2km from mouth.

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- distributed over entire river
chum	- upper reaches to dam, heavy concentration on some bars

GENERAL REMARKS

Potential: A number of tributaries to the Stave River above the dam have good potential as salmon spawning streams.

1955 Concentrated sports fishery. Up to 60 anglers per day during pink run.

1956 Good steelhead angling during winter months. Chum spawning grounds are tidal.

1960 Sports fishery increasing — recommend restrictions during Oct. Nov.

1963/65 Serious fry losses, particularly of pinks, occur every spring due to diurnal fluctuations in discharge from Ruskin Power Plant. Spawners are also subjected to severe losses, particularly when low tides occur between midnight and 08.00.

1968/71 This area offers opportunity for controlled flow spawning project.

1977 Tremendous potential for enhancement.

1978 Log boom storage in the lower reaches should be halted or controlled. Enhancement work on the side channel increases the area of spawning ground.

1979 Pink run appears to be destroyed by mid December flood.

1981 Problem of sport fishermen jigging for chum. This area should be closed to sport fishing during October - November.

continued.....

STAVE RIVER

1982 Annual fry loss due to fluctuating water levels. A 25,000 egg incubation box was installed at Sayers Creek on Stave Lake. The project is run by the Stave Lake Correctional Camp and will hopefully re-introduce chinook salmon to the Stave River.

1983 3 stream inspections done this season. 50,000 chinook fry released Jan. 1984 from Chehalis Hatchery into Stave, 30% loss due to heavy rains Jan. 3-5, 1984.

1984 Annual fry and adult loss due to fluctuating water levels. Stream was inspected 9 times this season. Helicopter is the best method of enumeration. 50,000 chinook smolts were released below Ruskin Dam from Sayers Creek project.

Light egg digging reported 1981/84.

Water levels fluctuate with releases from Hydro Dam.

ESCAPEMENT RECORD FOR STAVE RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			200	1500	1500	
48				7500		
49				3500	1500	
50				400		
51			200	1500	750	75
52			1500	3500		200
53			75	1500	1500	75
54		75	75	750		75
55		200	200	5000	7500	UNK
56		UNK	25	1500		UNK
57		UNK	400	3500	7500	200
58		25	75	750		UNK
59		25	75	5000	1383	25
60		25	25	6000		UNK
61		25	25	10000	3994	UNK
62		25	25	6000		25
63		25	25	7500	910	25
64		25	200	20000		25
65		25	200	18000	226	25
66		25	200	75000		25
67		25	400	35000	750	
68		25	400	75000		
69			400	75000	1500	
70			400	75000		
71			400	35000	400	
72			200	35000		
73			750	15000	400	
74			750	35000		
75			200	3500	400	
76			75	7500		
77			400	12000	400	
78	25	25	200	15000		
79			75	15000		
80		UNK	300	12000	-	
81		N/O	25	34500	-	
82			50	25000		
83			50	40000	75	
84			200	27500	-	
85						

TIMING:

Arrive			OCT	SEP-OCT	SEP-OCT	
Start			OCT	SEP-OCT	OCT	
Peak			NOV	OCT-NOV	NOV	
End			DEC-JAN	OCT-NOV	DEC	

REMARKS

Steelhead Creek

See Weaver Creek p.105

ESCAPEMENT RECORD FOR STEELHEAD CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78			25	400		
79	750		750	1500	200	
80	800		500	1200	-	
* 81			200	800	-	
82	3500		80	3000	-	
83	100		100	900	UNK	
84	100		300	550		
85						

TIMING:

Arrive	OCT		OCT-NOV	OCT	OCT	
Start	OCT		OCT-NOV	OCT	OCT	
Peak	OCT-NOV		NOV-E. DEC	NOV	OCT	
End	L. NOV		JAN-FEB	DEC	NOV	

REMARKS 1981 Sockeye figures included with Weaver Creek.

NAME OF STREAM STEELHEAD CREEK RAB NO. 00-0400-140

LOCAL NAME (Evans Creek)

DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 122 SE.

LOCATION OF MOUTH Flows SE. into Weaver Creek close to spawning channel.

LENGTH km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

Impassable rock falls .80 km from mouth

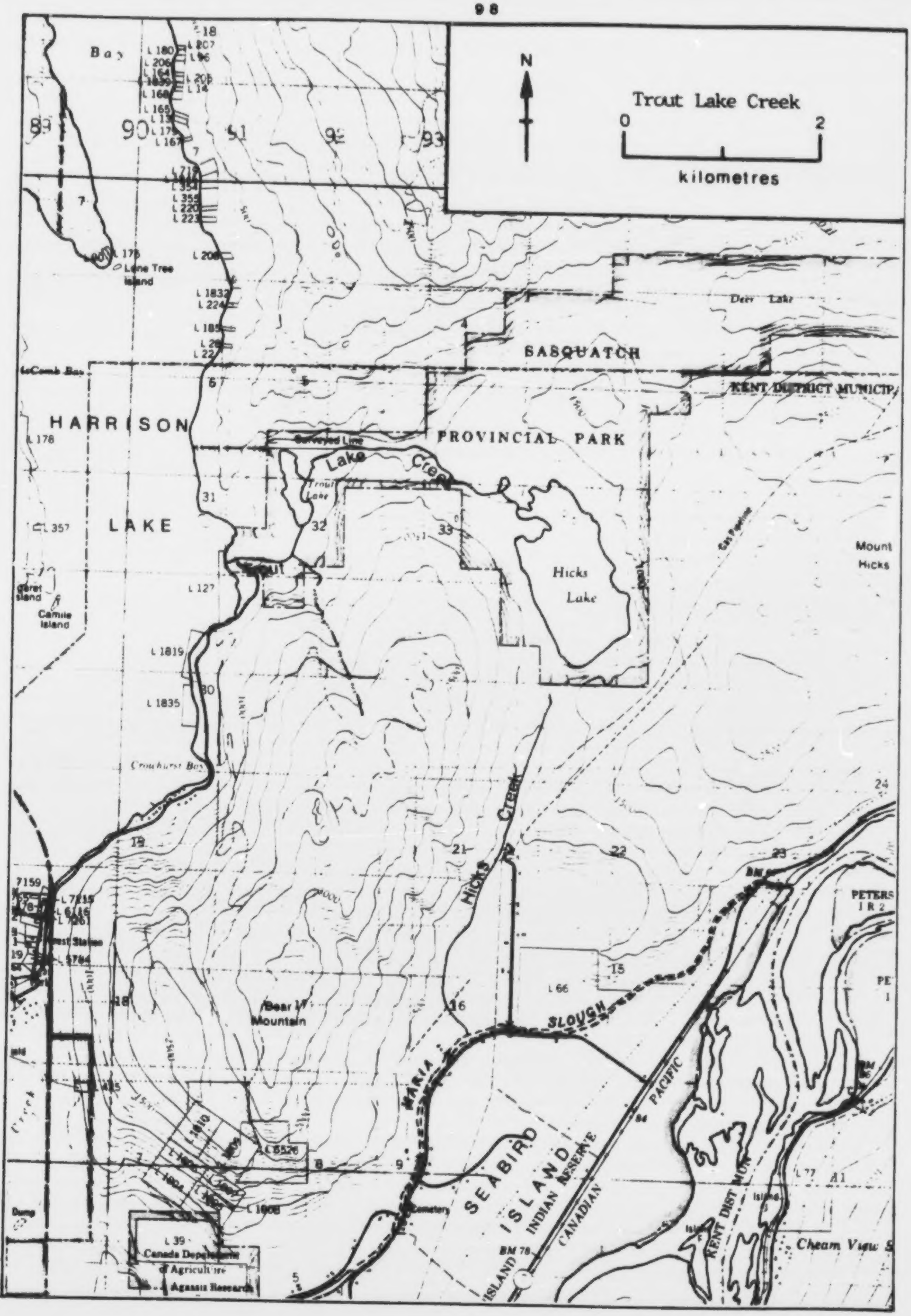
SPAWNING DISTRIBUTION

Species	Section of Stream Used
sockeye	- throughout
coho	- throughout
chum	- throughout

GENERAL REMARKS

1978	Bed cleaned up and channel improved.
1979	Much of last years cleanup will have been damaged by mid December rain storm. 50% loss due to flood. Extensive scouring — course of stream has changed in some areas.
1981	Figs. for sockeye included with Weaver Creek. Slight erosion and silting, some scouring in November rainy period.
1982	Culvert blown out in December. Flood-heavy erosion and gravel displacement, some erosion during flood in Jan. 1983. 40% loss due to floods.
1983	9 stream inspections. 100% loss due to heavy rains Jan. 1984
1984	Some bed load movement. Water levels low early in season. Stream was walked 10 times this season. Larger culvert installed by Dept. of Highways this year.

Predation by birds, man and bears.


Trout Lake Creek
N
0
2
kilometres
HARRISON
LAKE
Lone Tree Island
McComb Bay
Surveyed Line
Trout Lake
Lake Creek
Trout
Hicks Lake
SASQUATCH
PROVINCIAL PARK
KENT DISTRICT MUNICIP
Deer Lake
Mount Hicks
Crowhurst Bay
Camile Island
Hicks Creek
Bear Mountain
MARIA SLOUGH
SEABIRD ISLAND INDIAN RESERVE
CANADIAN PACIFIC
KENT DIST MUN
Cemetery
Canada Department of Agriculture Agassiz Research
Dump
Cheam View
PETERS I R 2
Island
Creek
Gas Pipeline

NAME OF STREAM TROUT LAKE CREEK RAB NO. 01-0700

LOCAL NAME (Hatchery Creek)

DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 121 SW.

LOCATION OF MOUTH Flows W. into SE. end of Harrison Lake, Yale Dist.

LENGTH 2 km WIDTH 6 m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C) 3.3 (March 1/71)

COMPOSITION: Bedrock Boulder 70% Coarse 18% Fine 9%

Silt & Sand Unclassified 3% pools

Barriers or Points of Difficult Ascent:

Impassable culvert 1.6km from mouth

SPAWNING DISTRIBUTION

Species	Section of Stream Used
sockeye	- from mouth to culvert
coho	- lower reaches
chum	- beach spawning, near creek mouth

GENERAL REMARKS

1955	This stream has been unstable since a dam on it washed out in 1949. Loggers operate bulldozers in the stream to control flow of water under logging road bridges.
1956	The watershed is now completely logged off.
1960	Department of Recreation and Conservation bulldozed out most of coho redds.
1966	Chum spawning at mouth and in beach gravels. Stream is steep and turbulent.
1971	A rocky small creek. Some work done on highway culvert to allow coho to reach upper regions. Probably more coho than reported actually present.
1974	Further inspections are taking place presently to determine if spawning grounds upstream of culvert warrant further work.
1975	50% erosion and silting — lower end of stream heavily damaged due to extensive run-off.
1979	Rain storm in December caused considerable scouring. Spawning prior to that date probably severely affected.
1982	Good year for sockeye probably due to overcrowding from Weaver Creek. 9 inspections this year.
1984	Good site for enhancement project on coho. Could be operated by local people along with Parks personnel. Beach spawners best enumerated by air Stream walked 6 times and flown once this year.

Predation: birds, seals in Harrison system, man.

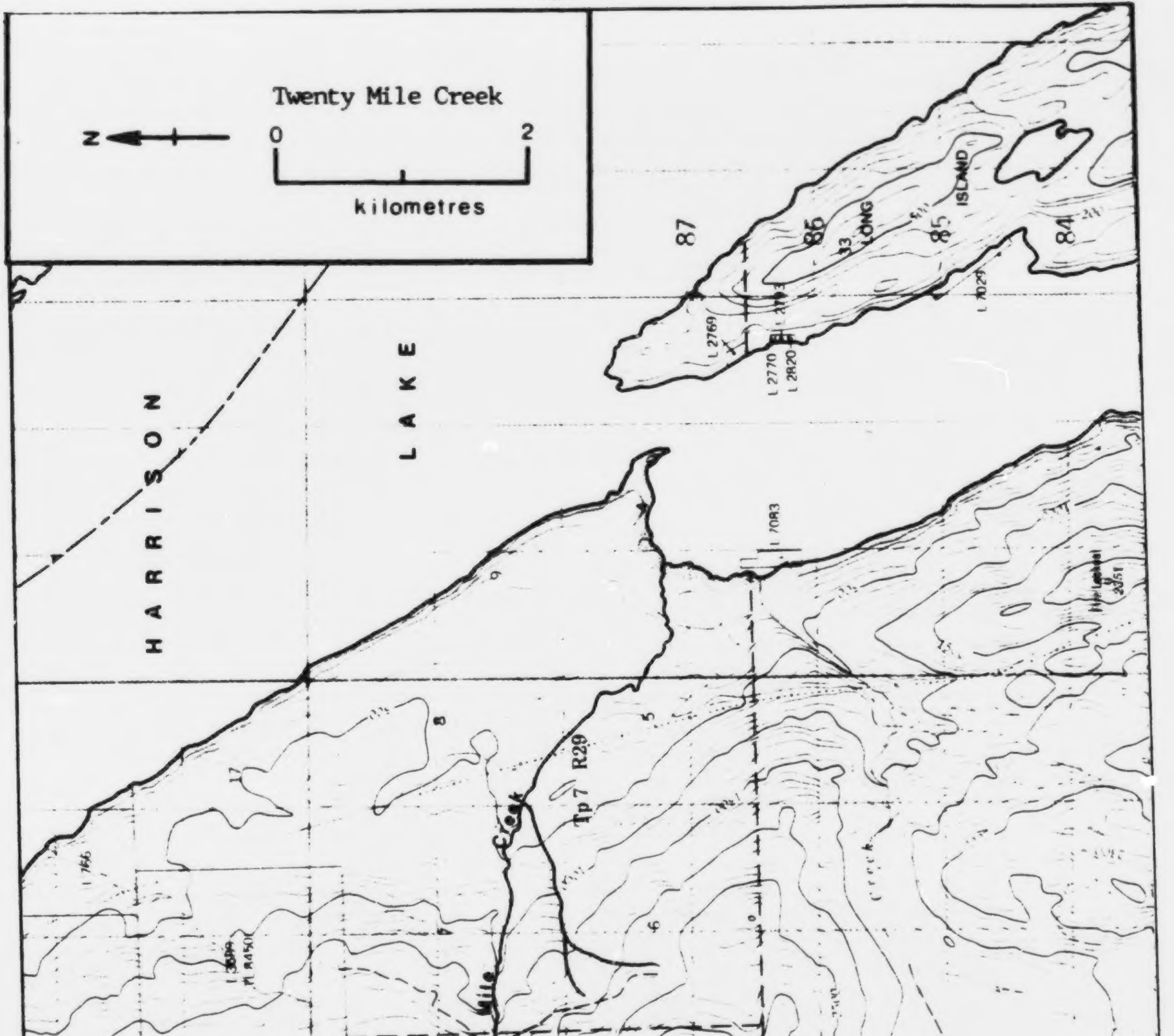
ESCAPEMENT RECORD FOR TROUT LAKE CREEK (Hatchery Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947	1500		75	200	UNK	
48	200		25			
49	25		25	75	200	
50			NO RECORDS FOR 1950			
51	200		25	25		
52	25		25	75		
53	25		25	25		
54			NO RECORDS FOR 1954			
55						
56						
57						
58						
59						
60	25		25			
61				25		
62			UNK			
63						
64			25			
65			25			
66			25	150		
67						
68						
69			25			
70			25			
71			200			
72			25			
73			25			
74	25		25	25		
75	25		75	75		
76			25			
77			25			
78			25	75		
79			25	75		
80	N/O		30	50		
81	N/O		10	350	25	
82	350		30	300		
83	UNK		20	100		
84	UNK		70	1100		
85						

TIMING:

Arrive	SEP		OCT-NOV	SEP-NOV	SEP	
Start	SEP		OCT-DEC	SEP-NOV	OCT	
Peak	OCT		NOV-DEC	OCT-DEC	OCT	
End	NOV		DEC-JAN	NOV-JAN	OCT	

REMARKS


Twenty Mile Creek
N
0
2
kilometres
HARRISON
LAKE
LONG
ISLAND
87
86
85
84
33
L 2760
L 2770
L 2820
L 2763
L 7029
L 7083
DOUGLAS
PROVINCIAL
FOREST
Twenty
Mile
Creek
Tp7 R29
Tp7 R30
8
5
6
9
34
38
L 765
L 2339
TL 8446
3500

NAME OF STREAM TWENTY MILE CREEK RAB NO. 01-1700

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 121 NW

LOCATION OF MOUTH Flows SE. into Harrison Lake, W. of Long Isl. New Westminster District.

LENGTH km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (^{O}C) 3.3 (March 12, 1971)

COMPOSITION: Bedrock Boulder 56% Coarse 27% Fine 13%

Silt & Sand Unclassified 4% pools

Barriers or Points of Difficult Ascent:

Impassable after .40km due to gradient
Driftwood from lake piles into stream during high water.

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- near mouth of stream
chum	- some beach spawning, remainder scattered

GENERAL REMARKS

1956 Historically this stream has supported runs of sockeye, coho and chinook Logging of watershed may have contributed to their loss. Forest cover now returning.

1971 Access impossible due to transportation problems.

1981 This stream has stabilized quite a lot in the past five or six years -- since logging operations moved farther away from the lake. One heavy rain storm in October caused heavy silting and erosion. Stream bed changed before spawners arrived.

1983 3 Stream inspections done this season. Heavy rains in Jan 1984, but loss of spawners unknown.

1984 Heavy snowfall made access impossible.

Water levels normal with seasonal flooding.

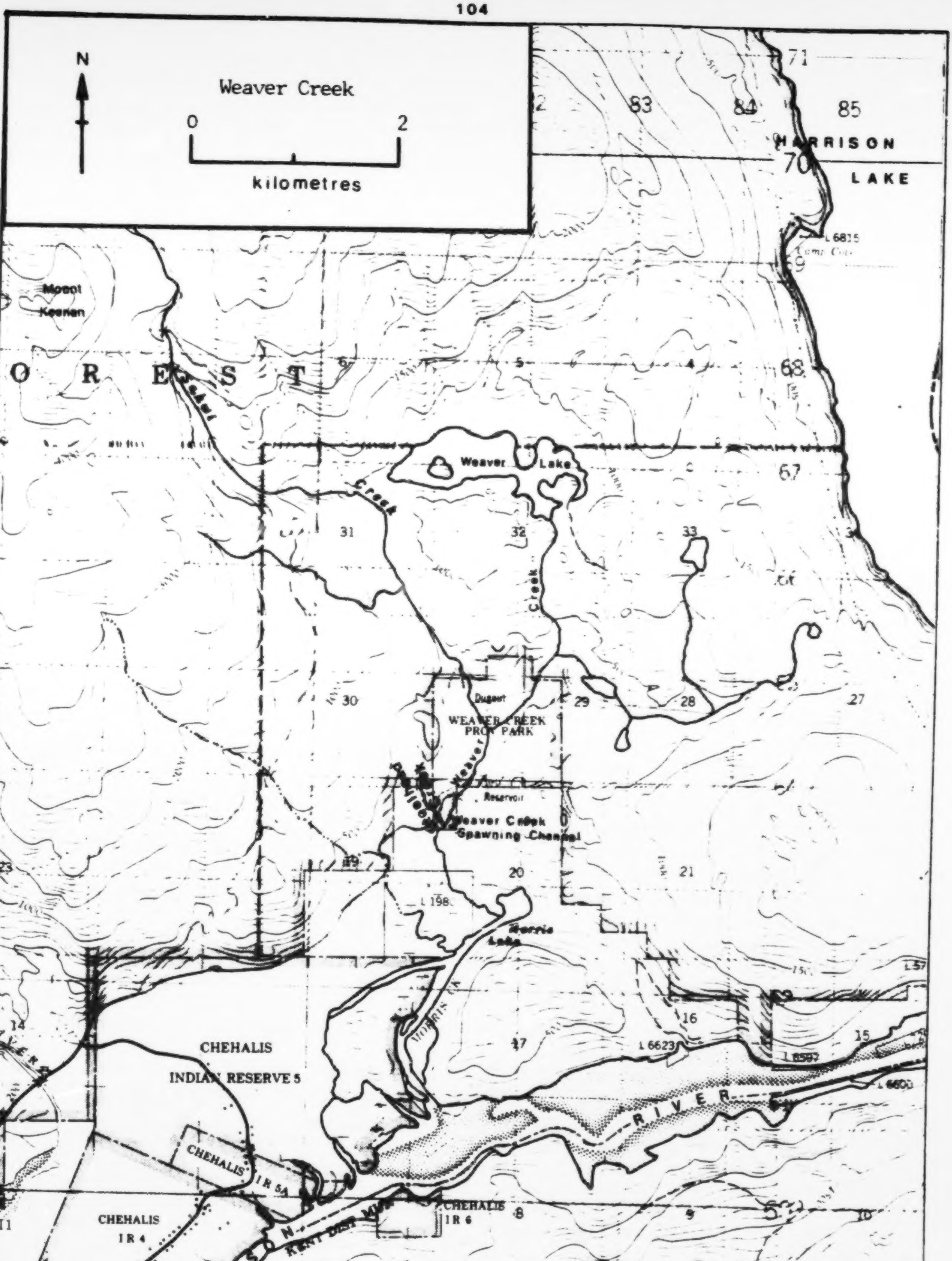
ESCAPEMENT RECORD FOR TWENTY MILE CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48				25		
49						
50						
51			UNK	25		
52						
53						
54						
55						
56						
57						
58						
59						
60						
61				25		
62						
63				25		
64				25		
65				200		
66				200		
67						
68			25	200		
69			25	200		
70						
71						
72						
73			25	25		
74			25	25		
75			25	25		
76						
77			25	200		
78			25	25		
79			N/0	N/0		
80			N/0	N/0		
81			N/0	70		
82			15	25		
83			N/0	N/0		
84			NOT INSPECTED	UNK		
85						

TIMING:

Arrive			NOV	OCT		
Start			NOV	OCT		
Peak			DEC	OCT		
End			JAN	NOV		

REMARKS


N
Weaver Creek
0
2
kilometres
HARRISON
LAKE
Mount
Keenan
O R E S T
Sasquatch
Creek
Weaver Lake
Weaver
Creek
Dugout
WEAVER CREEK
PROV PARK
Reservoir
Weaver Creek
Spawning Channel
Morris
Lake
MORRIS CR
CHEHALIS
INDIAN RESERVE 5
CHEHALIS
I R 5A
CHEHALIS
I R 4
CHEHALIS
I R 6
HARRISON
RIVER
KENT DIST MUN
L 6815
L 1980
L 6623
L 6592
L 6600
71
70
69
68
67
66
83
84
85
31
32
33
30
29
28
27
19
20
21
23
16
17
15
14
11
8
9
10
6
5
4
1

NAME OF STREAM WEAVER CREEK RAB NO. 01-0500-010

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 121 SW.

LOCATION OF MOUTH Flows S. into Morris L. W. of S. end of Harrison L., New Westminster Dist.

LENGTH km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C)

COMPOSITION: Bedrock Boulder 21% Coarse 22% Fine 38%
Silt & Sand 13% Unclassified 6% logs, pools

Barriers or Points of Difficult Ascent:

Impassable falls 3.2km from mouth

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chum	- throughout
sockeye	- "
coho	- upper reaches

GENERAL REMARKS

1950/59	Watershed almost completely logged off. Stream flow work by local farmer is very harmful to stream bed (58)
1959	Light sockeye return probably due to 1955 floods. Pinks all but extinct. Coho suffer from poachers during late winter months.
1960/69	Salmon Commission plans for a controlled flow spawning channel to be built in 1965 — should save some of the runs.
1965	Success of spawning - pinks 98.4%, chum 98.9%, coho 79.7%, sockeye 96.15%.
Channel	Coho did not take to the channel as they prefer headwaters of Weaver Cr. Sockeye concentrated at top end too. Chum were happy in the channel. 27 cfs. flow maintained.
1965	Problem to provide water for spawners in Sakwi. Rock work required along lower right bank in early summer or serious losses may occur when stream breaks out over fields.
1967	The need for a proper fence to guide sockeye to the channel is very evident.
1969/70	Road and power line construction has to be watched closely.
1971	In excess of 100,000 coho fry removed from the channel prior to drying up and placed in other streams in the subdistrict and to the Fisheries Research Board.
1973	Creek spawn for chum and sockeye has probably been lost during Jan. 74. Channel spawn o.k.

continued.....

continuation

WEAVER CREEK

1975 Much damage to natural stream. 100% erosion and silting.A great deal of gravel was carried away.

1976 Chum were moved from spawning channel to natural creek using large fibreglass buckets and a truck.Natural creek affected by amount of water going into spawning channel.

1977 Flood conditions in early November from Sakwi valley did extensive damage to Weaver Creek. Above Sakwi spawning was very good and the stream stable. Much remedial work is required on the lower Weaver Cr.

1978 Work will be necessary in the summer of 1979 to widen and even spawning area by removing excess gravel from the first bridge to the confluence of Weaver Saqwi.

1981 Probably some egg loss due to November rains. Heavy rain washed out fence.

1982 Problem developed in September with large numbers of sockeye in stream and very low flows — resulting in low oxygen content and causing sizeable mortality. Heavy rains in latter season caused heavy scouring.

1983 11 stream inspections done this season. 60% loss in Weaver Creek streambed below Sakwi Cr. Average loss for total streambed above and below Sakwi Creek is 60%. Weaver Creek spawning channel is o.k. Loss due to heavy rains in Jan 1984.

1984 Stream was walked 12 times. Counting fence at channel gave accurate chum figures throughout early and mid spawning season.

1980/84 Reported considerable egg digging at peak spawning.

Predation: birds, bears coyotes,man.

1978/84 Silting and erosion from Sakwi Creek during heavy rains.

ESCAPEMENT RECORD FOR WEAVER CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947	7500		75	750	7500	
48	15000		25	400		
49	15000		750	3500	3500	
50	35000		750	1500		
51	15000		750	750	400	75
52	15000		7500	1500		25
53	15000		3500	400	750	75
54	35000		1500	400		
55	35000		1500	750	1500	
56	5500		750	75		
57	15000		750	400	400	400
58	36199		1500	3500		400
59	8379		750	2000	87	
60	7042		400	750		200
61	4383		2100	400	539	200
62	15962	25	1500	3500		200
63	14469	25	400	1500	693	200
64	1370	25	1000	750		200
65	11162		1500	3500	528	
66	20146		1580	3670		
67	15000		750	1500	400	
68	7500		750	3500		
69	35000		750	15000		
70	11000		1500	1500		
71	3500		3500	1500	1500	
72	35000		400	35000		
73	35000		3500	26000		
74	75000		3500	35000		
75	35000		7500	15000	1500	
76	75000		7500	15000		
77	56000		3000	30000	4000	
78	75000		750	35000		
79	75000		750	35000	750	
80	75000		1500	28000	-	
81	44000		800	27000	2300	
* 82	294500		625	37500		25
* 83	21400		600	41000	1900	-
* 84	60370		900	35000	-	
85						

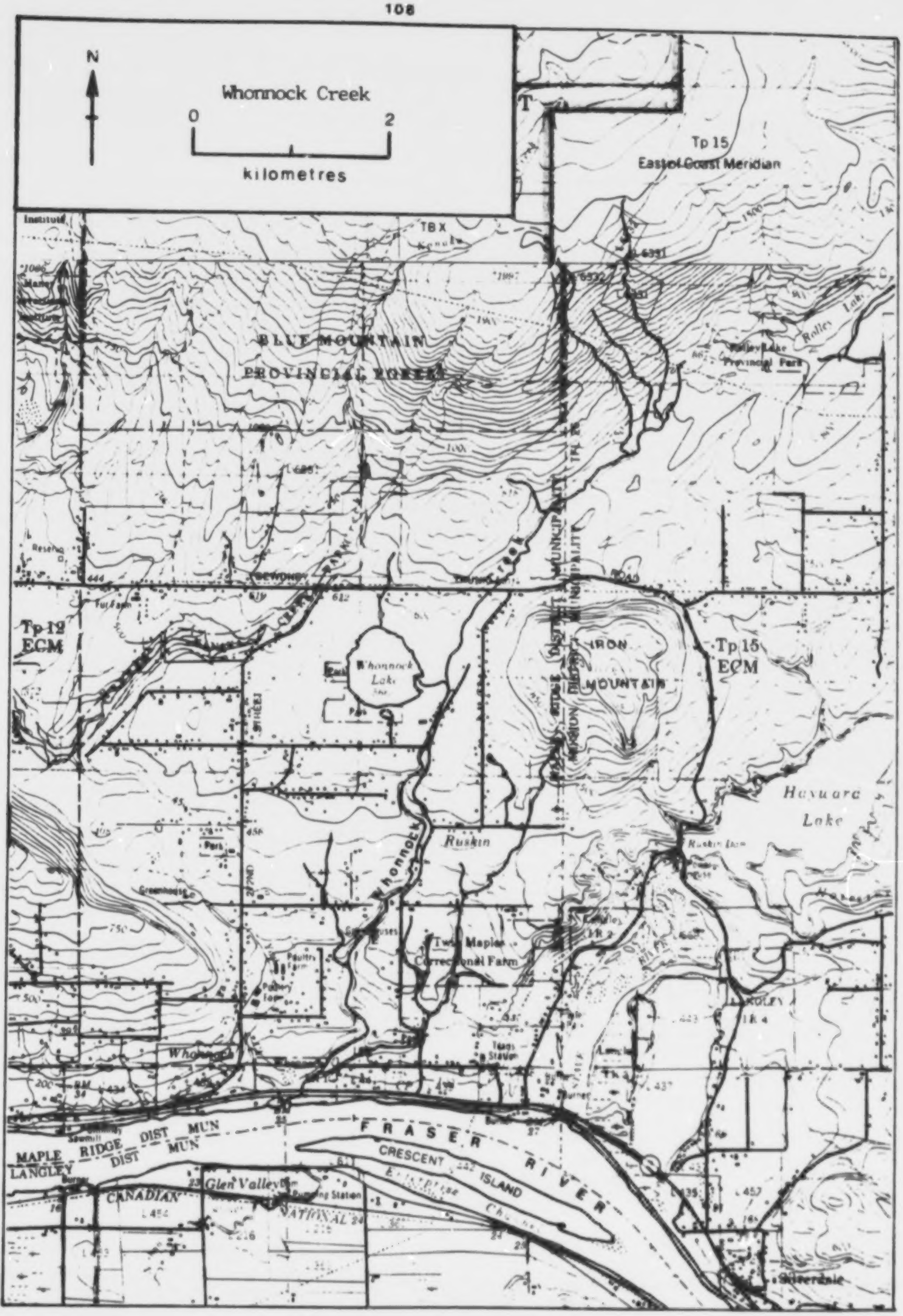
TIMING:

	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
Arrive	SEP-OCT	-	OCT-NOV	SEP-OCT	OCT	-
Start	OCT	-	OCT-NOV	OCT	OCT	-
Peak	OCT	-	NOV-DEC	OCT-NOV	OCT	-
End	NOV	-	DEC-FEB	DEC	NOV	-

REMARKS

Escapement totals include the natural creek plus the artificial spawning channel.

1982 Sockeye totals from I.P.S.C. and include: Hatchery, Steelhead, Squakum and Sakwi Creeks -- also Morris Lake area.
1983 Sockeye, pink and chum figs from I.P.S.C.
1984 Sockeye figs from I.P.S.C.


N
Whonnock Creek
0
2
kilometres
Tp 15
East of Coast Meridian
TBX
BLUE MOUNTAIN
PROVINCIAL FOREST
Rolley Lake
Rolley Lake Provincial Park
Tp 12
ECM
Whonnock Lake
IRON
MOUNTAIN
Tp 15
ECM
Hayward
Lake
Ruskin
Whonnock
Ruskin Dam
Twin Maples
Correctional Farm
Whonnock
MAPLE RIDGE DIST MUN
LANGLEY DIST MUN
FRASER RIVER
CRESCENT ISLAND
Glen Valley
CANADIAN
NATIONAL
Silverdale

NAME OF STREAM WHONOCK CREEK RAB NO. 00-0370

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 122 SE.

LOCATION OF MOUTH Flows S. into Fraser R.,W. of Stave River, New Westminster Dist.

LENGTH 11 km WIDTH 5 m DRAINAGE km^2

DISCHARGE (m^3/s) MAX 17.8 Jan 10, 1961 MIN 0.003 Oct. 15, 1962

Temperature (^{o}C) 2.8 (March 26,1971)

COMPOSITION: Bedrock Boulder 70% Coarse 8% Fine 11%

Silt & Sand 7% Unclassified 4% logs and pools

Barriers or Points of Difficult Ascent:

Beaver dams near Whonnock Lake — monitored and removed as necessary.

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chum	- in lower 3.2km
coho	- to 1.6km above Dewdney Trunk Road
steelhead	- in upper reaches

GENERAL REMARKS

1950^{s} A very fine stream, but runs disappointing. Scouring of redds in '55 may be responsible for weak pink return.

1958 Salmon gill-nets operating at the stream mouth collected most of the fish as they schooled there.

1963 This is a very valuable stream. Coho runs are being lost because too much water is being removed under licence during summer months.Stream clearance work is required at several spots.

1965 Boundry signs needed to protect pinks and chum schooled at stream mouth during October salmon gill-net openings.

1969/70 Limited gravel available — trail cut over the lower 7km for better access.

1972/73 Stream can support much better runs.

1974 Quite a few fish died before spawning due to critical low water level.

1979 Extensive mortality — possibly 90% loss of spawn.

1982 Area is slowly being developed residentially.

1983 Evidence of illegal gill netting — unknown number of fish taken. 10 stream inspections done this season. 90% loss of spawners due to heavy rains Jan. 1984

1984 Chums slightly up over brood. Stream was walked 10 times this season. Coho enumeration in later season was hampered by stream freezing over.

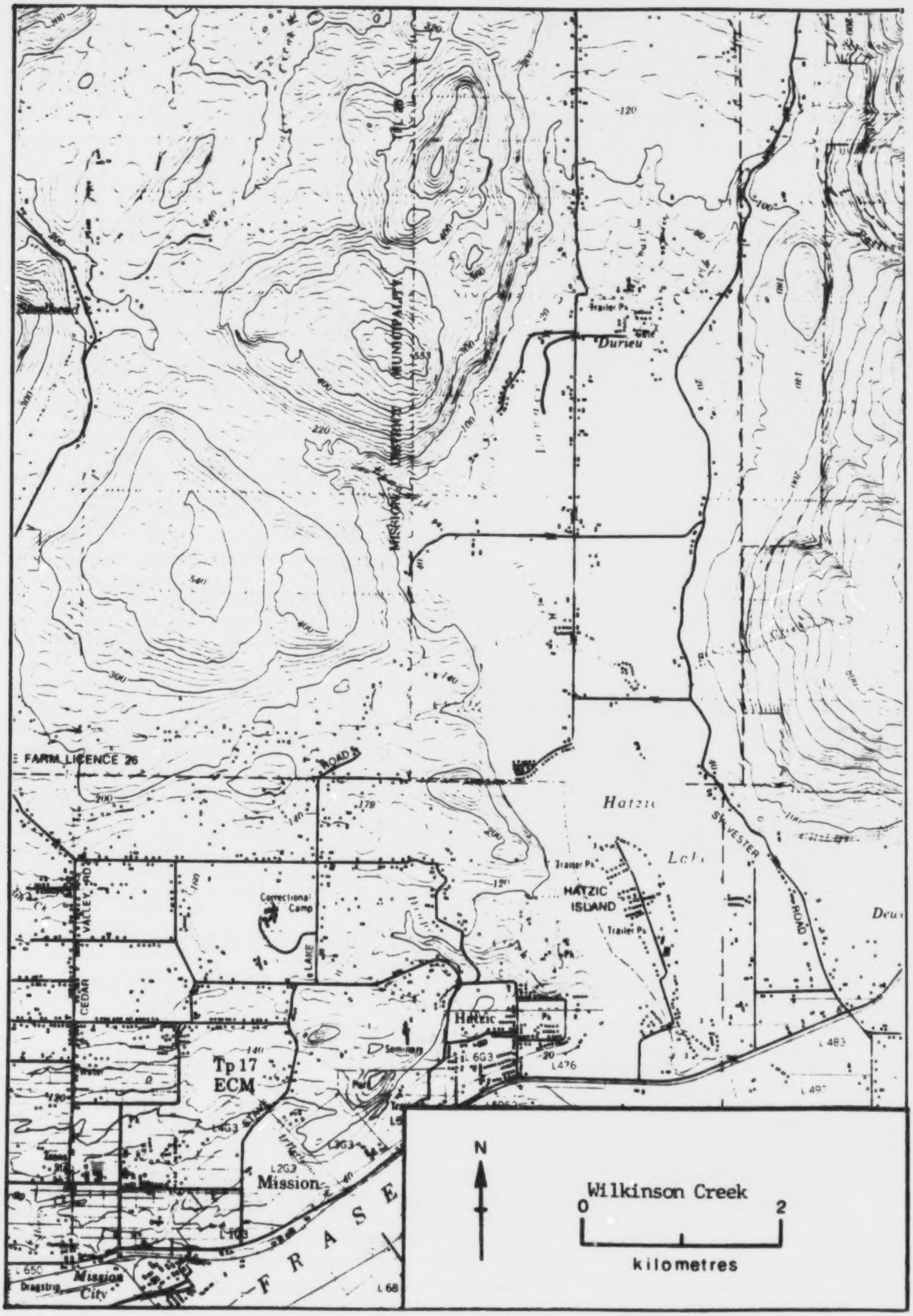
ESCAPEMENT RECORD FOR WHONOCK CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			25	1500	3500	
48				200		
49			200	1500	1500	
50			75	750		
51			200	3500	3500	75
52			750	3500		200
53			400	1500	1500	25
54			200	400		25
55			200	750	3500	
56			25	200		
57			200	750	400	
58			25	300		
59			200	1600	57	
60			200	750		
61			75	400	200	25
62			100	275		25
63			200	1000	255	UNK
64			200	300		25
65			200	200	34	25
66			200	400		
67			200	750	75	
68			400	1500		
69			400	1500	200	
70			750	1500		
71			200	400	75	
72			200	400		
73			400	1500	75	
74			200	1500		
75			200	1500	75	
76			200	750		
77			600	2200	50	
78			200	750		
79			200	1500	25	
80			500	800	-	
81			75	4000	-	
82			155	1400	-	
83			200	800	-	
84			250	1100	-	
85						

TIMING:

Arrive			OCT-NOV	SEP-OCT	SEP	
Start			OCT-NOV	OCT	OCT	
Peak			DEC	OCT-NOV	OCT	
End			JAN-FEB	L. DEC	NOV	

REMARKS


Durieu
Trailer Pk
MISSION MUNICIPALITY
553
540
220
300
400
120
100
140
200
179
FARM LICENCE 26
ROAD
Hatzic
Lake
Trailer Pk
HATZIC
ISLAND
Trailer Pk
SYLVESTER
ROAD
CEDAR
VALLEY RD
LAKE
Correctional
Camp
Seminary
Hatzic
6G3
L476
L483
L497
Tp 17
ECM
L4G3
L3G3
L2G3
Mission
L1G3
FRASE
L68
L650
Dragstrip
Mission
City
N
Wilkinson Creek
0
2
kilometres

NAME OF STREAM (Wilkinson Creek) RAB NO. 00-0500-020-010

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 122 SE.

LOCATION OF MOUTH Flows into Bouchier Creek, N. of Hatzic Lake, New Westminster Dist.

LENGTH km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C) 7.2 (Feb. 19/71)

COMPOSITION: Bedrock Boulder 20% Coarse 30% Fine 35 %

Silt & Sand 10% Unclassified 5%, logs,pools

Barriers or Points of Difficult Ascent:

Impassable gradient at .80km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- bottom end
chum	- bottom end

GENERAL REMARKS

1952 Salmon migrating to and from this stream pass through Hatzic Pumping Station.

1954 This stream is in very good condition. Chum spawning grounds are limited, but there is plenty of room for coho in the upper reaches.

1967 This creek has been lost partly due to the pumping station at the outlet of Hatzic Lake, partly to logging and now farming and flood control has reduced the runs to the odd individual fish.

1968 While most Hatzic Valley stream received more chum salmon this season than in recent years, none were noted in Wilkinson Creek.

1981 Stream is in very good condition. Very poor return on coho.

1983 8 stream inspections done this season. 50% loss due to heavy rains in Jan.

1984 Stream walked 5 time this season.

Normal seasonal fluctuations in water levels. 1982 reported some silting.

ESCAPEMENT RECORD FOR (Wilkinson Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48				25		
49			25	200		
50			UNK	25		
51			25	75		
52			75	75		
53			25	200		
54			75	25		
55			25	25		
56			25	75		
57			75	200		
58			25	25		
59			25	25		
60			25	25		
61			25	25		
62			25	25		
63			25	25		
64			75	25		
65			25	25		
66						
67						
68						
69						
70						
71			25			
72			NONE OBSERVED			
73			-	-		
74			NONE OBSERVED			
75			"	"		
76			"	"		
77			-	-		
78			NONE OBSERVED			
79			"	"		
80			25	75		
81			5	2		
82			5	75		
83			5	10		
84			10	30		
85						

TIMING:

	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
Arrive			NOV-DEC	OCT-NOV		
Start			NOV-DEC	OCT-DEC		
Peak			NOV-DEC	NOV-DEC		
End			DEC-JAN	NOV-DEC		

REMARKS

Worths Creek

See p. 32

NAME OF STREAM (Worth Creek, Worth's Creek) RAB NO. 00-0552-020-010

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 29 Mission/Harrison POSITION 49 122 SE.

LOCATION OF MOUTH Flows into Norrish Creek, E. of Hatzic Lake, New Westminster Dist.

LENGTH km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C)

COMPOSITION: Bedrock Boulder Coarse 10% Fine 15%

Silt & Sand 60% Unclassified 15%

Barriers or Points of Difficult Ascent:

groundwater source .80km from mouth

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	concentrated at mouth
chum	" " "

GENERAL REMARKS

1954 This stream has had good runs in the past, but has changed into a drainage ditch and it is not likely to produce many salmon in the future

1956 Logging operations across stream at various points. Removal of gravel dyke from east side of Suicide Creek by the Dyking Commission permitted high water to flood through to Worth's Creek

1965 Recommend stream improvement work.

1966 A very even flow in this creek during the season. Some flooding occurred when suicide creek went over the banks, but no damage seems to have resulted.

1968 The water flow is almost nil due to lower level of Suicide stream bed and a dry stream bed is general except during rain. The odd fish that spawned this season must be considered lost.

1975 This stream has become barren and dry most of the year, due to lowered water table in Suicide Creek area.

1979 Stream bed improvements were made this summer and were well utilized by returning stocks. Further enhancement should include maintainance to adequate water supply.

1983 Very stable stream due to enhancement. 8 stream inspections done this season. 30% loss of spawners due to heavy rains in Jan. '84.

1984 Stream walked 8 times this year. Dead pitch by Inch Creek Hatchery.

1981/84 Moderate silting at lower end. 1984 Course altered due to flood in Jan.84.

1982/84 Slight egg digging.

ESCAPEMENT RECORD FOR (Worth Creek, Worth's Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48				7500		
49			3500	1500	25	
50			25	200		
51			25	25		
52			25	400		
53			25	75		
54			25	75		
55			25	200		
56			75	400		
57			25	750		
58			25	750		
59			25	500		
60			25	25		
61			200	200		
62			25	200		
63			25	25		
64			300	200		
65			80	25		
66			400	400		
67			75	75		
68			25	25		
69			25	75		
70			25	25		
71			200	400		
72			N/0	N/0		
73			N/0	N/0		
74			N/0	N/0		
75				N/0		
76				1500		
77			25	500		
78			25	200		
79			25	1500		
80			50	600		
81			50	600		
82			150	1500		
83			40	800		
84			157	7240		
85						

TIMING:

Arrive			OCT-NOV	OCT-NOV		
Start			OCT-NOV	OCT-NOV		
Peak			NOV-DEC	NOV-DEC		
End			JAN-L. FEB	DEC-L. JAN		

REMARKS

Metric Equivalents

CONVERSION FACTORS

The following list of convenient equivalents of measure gives the relationship between imperial units and the International System of Units (SI).

1 inch equals 2.54 cm (centimetres)
1 foot equals 0.3048 m (metre)
1 statute mile equals 1.6093 km (kilometres)

1 cm (centimetre) equals 0.393 70 inch
1 m (metre) equals 3.2808 feet
1 km (kilometre) equals 0.621 37 mile

1 acre equals 43 560 square feet
1 acre equals 0.404 69 ha (hectare)
1 square mile equals 640 acres
1 square mile equals 2.5900 km^2 (square kilometres)
1 square mile equals 259.0 ha (hectares)

1 ha (hectare) equals 10 000 m^2 (square metres)
1 ha (hectare) equals 2.4710 acres
1 km^2 (square kilometre) equals 0.386 10 square mile

1 cubic foot equals 6.2288 imperial gallons
1 imperial gallon equals 4.546 09 L (litres)
1 imperial gallon equals 1.2010 U.S. gallons
1 U.S. gallon equals 0.133 68 cubic foot
1 cubic foot equals 0.068 317 m^3 (cubic metre)
1 m^3 (cubic metre) equals 35.315 cubic feet

1 cubic foot per second for one day equals 1.9835 acre-feet
1 cubic foot per second for one day covers one square mile to a depth of 0.037 19 inch
1 acre-foot equals 1.2335 dam^3 (cubic decametres)
1 m^3/s (cubic metre per second) for one day equals 86.4 dam^3 (cubic decametre)
1 m^3/s (cubic metre per second) for one day covers one square kilometre to a depth of 0.0864 m (metre)

1 foot per second equals 0.6818 mile per hour
1 mile per hour equals 1.467 feet per second
1 m/s (metre per second) equals 3.6 km/h (kilometre per hour)
1 km/h (kilometre per hour) equals 0.2778 m/s (metre per second)

1 cubic foot per second equals 0.028 317 m^3/s (cubic metre per second)
1 m^3/s (cubic metre per second) equals 35.315 cubic feet per second

1 pound equals 0.453 59 kg (kilogram)
1 kg (kilogram) equals 2.2046 pounds

1 short ton (2000 pounds) equals 0.907 18 t (tonne)
1 t (tonne) equals 2204.6 pounds

degrees Celsius = 5/9 (degrees Fahrenheit − 32)
degrees Fahrenheit = 9/5 (degrees Celsius) + 32

FACTEURS DE CONVERSION

Voici une liste des unités de mesure impériales et leurs équivalences dans le Système international d'unités (SI).

1 pouce vaut 2.54 cm (centimètres)
1 pied vaut 0.3048 m (mètre)
1 mille terrestre équivaut à 1.6093 km (kilomètre)

1 cm (centimètre) équivaut à 0.393 70 pouce
1 m (mètre) équivaut à 3.2808 pieds
1 km (kilomètre) équivaut à 0.621 37 mille

1 acre vaut 43 560 pieds carrés
1 acre équivaut à 0.404 69 ha (hectare)
1 mille carré vaut 640 acres
1 mille carré équivaut à 2.5900 km^2 (kilomètres carrés)
1 mille carré équivaut à 259.0 ha (hectare)

1 ha (hectare) vaut 10 000 m^2 (mètres carrés)
1 ha (hectare) équivaut à 2.4710 acres
1 km^2 (kilomètre carré) équivaut à 0.386 10 mille carré

1 pied cube équivaut à 6.2288 gallons impérials
1 gallon impérial vaut 4.546 09 L (litres)
1 gallon impérial équivaut à 1.2010 gallon américain
1 gallon américain équivaut à 0.133 68 pied cube
1 pied cube vaut 0.068 317 m^3 (mètre cube)
1 m^3 (mètre cube) vaut 35.315 pieds cubes

1 pied cube par seconde pendant un jour équivaut à 1.9835 acre-pied
1 pied cube par seconde pendant un jour équivaut à un volume d'un mille carré par 0.037 19 pouce
1 acre-pied équivaut à 1.2335 dam^3 (décamètres cubes)
1 m^3/s (mètre cube par seconde) pour un jour vaut 86.4 dam^3 (décamètre cube)
1 m^3/s (mètre cube par seconde) pour un jour couvre un kilomètre carré à une profondeur de 0.0864 m (mètre)

1 pied par seconde équivaut à 0.6818 mille par heure
1 mille par heure équivaut à 1.467 pied par seconde
1 m/s (mètre par seconde) vaut 3.6 km/h (kilomètre par heure)
1 km/h (kilomètre par heure) vaut 0.2778 m/s (mètre par seconde)

1 pied cube par seconde équivaut à 0.028 317 m^3/s (mètre cube par seconde)
1 m^3/s (mètre cube par seconde) équivaut à 35.315 pieds cubes par seconde

1 livre équivaut à 0.453 59 kg (kilogramme)
1 kg (kilogramme) équivaut à 2.2046 livres

1 tonne courte (2000 livres) équivaut à 0.907 18 t (tonne)
1 t (tonne) équivaut à 2204.6 livres

degrés Celsius = 5/9 (degrés Fahrenheit − 32)
degrés Fahrenheit = 9/5 (degrés Celsius) + 32